



SERVICE MANUAL **EQ430**

marantz®

model EQ430

Graphic Equalizer / Audio Mixer

MARANTZ DESIGN AND SERVICE

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2, Avenue Léopold III
B-7120 PERONNES-lez-BINCHE
BELGIUM
TWX: 57589 SEPLT B

The following information must be supplied to eliminate delays in processing your order:

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2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
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Parts may be ordered from the following addresses:

EUROPE

MARANTZ S.A.
European Parts Department
2, Avenue Léopold III
B-7120 Péronnes-lez-Binche
Belgium
Telex: 57589

MARANTZ NORSKE A.S.
Refstadalleen 13
Oslo 5
Norway
Telex: 19659

MARANTZ DENMARK
Bregnerødvej 132b
3460 Birkerød
Denmark
Telex: 39137

MARANTZ GMBH AUSTRIA
Wiedner Hauptstrasse 98
1050 Wien
Austria
Telex: 113583

MARANTZ S.A.
326 Avenue Louise Bte 32
1050 Brussels
Belgium
Telex: 26602

MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

MARANTZ BELGIUM
45 Rue Auguste Van Zande
1080 Brussels
Belgium

MARANTZ SVENSKA A.B.
Svartviksvangen 56
Traneberg - Box 12016
16112 Bromma
Sweden
Telex: 13449

MARANTZ GERMANY GMBH
Max Planckstrasse, 22
6072 DREIEICH 1
West Germany
Telex: 4185316

MARANTZ AUDIO U.K. LTD.
Unit 15/16
Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

AUSTRALIA

MARANTZ AUSTRALIA PTY., LTD.
32 Cross Street
Brookvale, N.S.W. 2100
Australia
Telex: 24121

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.

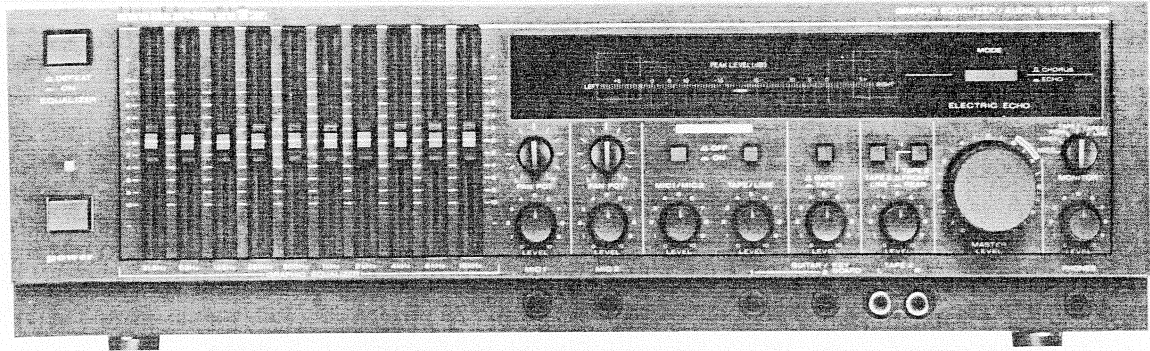
In case of difficulties, do not hesitate to contact the Technical Department at abovementioned address.

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MODEL EQ430 GRAPHIC EQUALIZER/AUDIO MIXER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model EQ430 Graphic Equalizer/Audio Mixer.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

1. P.W. BOARDS

As can be seen from the circuit diagram chassis of Model EQ430 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Pan Pot Volume mounted on P.W. Board PD01
2. Mic Echo Mixing mounted on P.W. Board PE01
3. EQ. Display/
Power Supply mounted on P.W. Board PG01
4. Equalizer Volume mounted on P.W. Board PJ01
5. Power Switch mounted on P.W. Board PK01
6. LED mounted on P.W. Board PN01
7. Chorus/Echo Switch mounted on P.W. Board PS01
8. Equalizer Switch mounted on P.W. Board PT01
9. Master Volume mounted on P.W. Board PV01
10. Mic Jack mounted on P.W. Board PW01
11. Guitar Jack mounted on P.W. Board PX01
12. Headphone Jack mounted on P.W. Board PY01
13. Pin Jack mounted on P.W. Board PZ01

MN3101 (QE20)
CMOS Clock Generator/Driver for BBD's

● Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V _{DD}	−18~+0.3	V
IN/OUT Terminal Voltage	V ₁ , V ₀	V _{DD} −0.3~+0.3	V
Power dissipation	P _D	200	mW
Operating Temperature	T _{opr}	−10~+70	°C
Storage Temperature	T _{stg}	−30~+100	°C

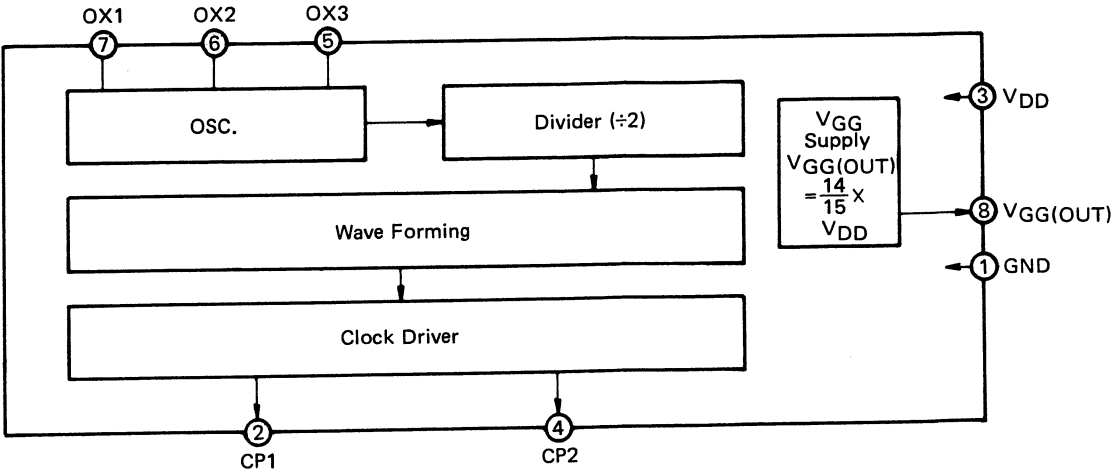
● Operating Conditions (Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply Voltage	V _{DD}	GND=0V	−8	−15	−16	V

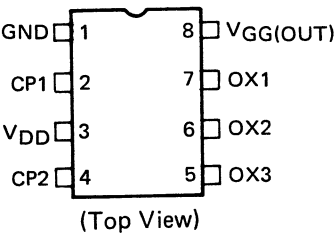
● Electrical Characteristics (Ta=25°C, V_{DD}=−15V, GND=0V)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply Current	I _{DD}	Nonload, clock output 40kHz		3		mA
Power dissipation	P _{tot}			45		mW
OX1 Input terminal						
High level Input Voltage	V _{IH}		0		−1	V
Low level Input Voltage	V _{IL}		V _{DD} +1		V _{DD}	V
Input leak Current	I _{Leak}	V ₁ =0~-15V			30	μA
OX2 Output terminal						
High level Output Current	I _{OH} (1)	V ₀ =-1V	0.6			mA
Low level Output Current	I _{OL} (1)	V ₀ =-14V	0.5			mA
Low level Output Leak Current	I _{LOL} (1)	V ₀ =V _{DD}			30	μA
High level Output Leak Current	I _{LOH} (1)	V ₀ =GND			30	μA
OX3 Output terminal						
High level Output Current	I _{OH} (2)	V ₀ =-1V	1.5			mA
Low level Output Current	I _{OL} (2)	V ₀ =-14V	2			mA
Low level Output Leak Current	I _{LOL} (2)	V ₀ =V _{DD}			30	μA
High level Output Current	I _{LOH} (2)	V ₀ =GND			30	μA
CP1, CP2 Output terminal						
High level Output Current	I _{OH} (3)	V ₀ =-1V	10			mA
Low level Output Current	I _{OL} (3)	V ₀ =-14V	10			mA
Low level Output Leak Current	I _{LOL} (3)	V ₀ =V _{DD}			30	μA
High level Output Leak Current	I _{LOH} (3)	V ₀ =GND			30	μA
V _{GG} (OUT) Output terminal						
V _{GG} Output Voltage	V _{GG} (OUT)			-14		V

● Block Diagram



● Terminal Connections



MN3008 (QE15, QE18)
2048-Stage Low Noise BBD for Analog Signal Delays

● Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Terminal Voltage	V _{DD} , V _{GG} , V _{CP} , V _I	−18~+0.3	V
Output Voltage	V _O	−18~+0.3	V
Operating temperature	T _{opr}	−20~+60	°C
Storage temperature	T _{stg}	−55~+125	°C

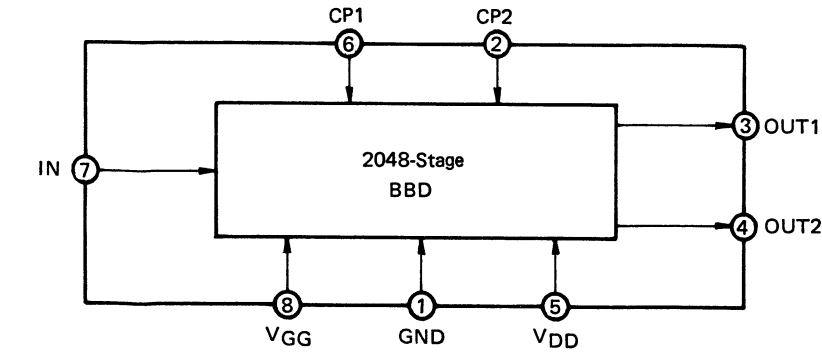
● Operating Conditions (Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply voltage	V _{DD}		−14	−15	−16	V
Supply voltage	V _{GG}			V _{DD} +1		V
High level clock voltage	V _{CPH}		0		−1	V
Low level clock voltage	V _{CP_L}			V _{DD}		V
Clock frequency	f _{CP}		10		100	kHz
Pulse width (Clock Pulse)	t _w (CP)		0.4T		0.5T	
Rise up time (Clock Pulse)	t _r (CP)				500	ns
Fall down time (Clock Pulse)	t _f (CP)				500	ns
Clock cross point	V _x		0		−3	V
Clock input capacitance	C _{CP}				1400	pF
Input bias voltage (DC)	V _{Bias}		−5		−10	V

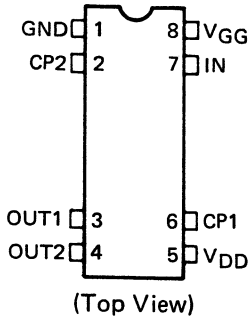
● Electrical Characteristics (Ta=25°C, V_{DD}=V_{CP_L}=−15V, V_{CPH}=0V, V_{GG}=−14V, R_L=100kΩ)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Frequency input	f _i	f _{CP} =40kHz, V _i =1.2Vrms Output attenuation=3dB(0dB at f _i =1kHz)			10	kHz
Voltage input amplitude	v _i	f _{CP} =40kHz, f _i =1kHz, THD=2.5%			1.2	Vrms
Insert loss	L _i	f _{CP} =40kHz, f _i =1kHz, V _i =1.2Vrms	−4	0	4	dB
Total harmonic distortion	THD	f _{CP} =40kHz, f _i =1kHz, V _i =0.78Vrms		0.5	2.5	%
Noise output voltage	V _{no}	f _{CP} =100kHz, A curvature hearing compensation			0.4	mVrms
Signal to Noise ratio	S/N			78		dB

● Block Diagram



● Terminal Connections



AN6882 (QG19, QG20, QG21)

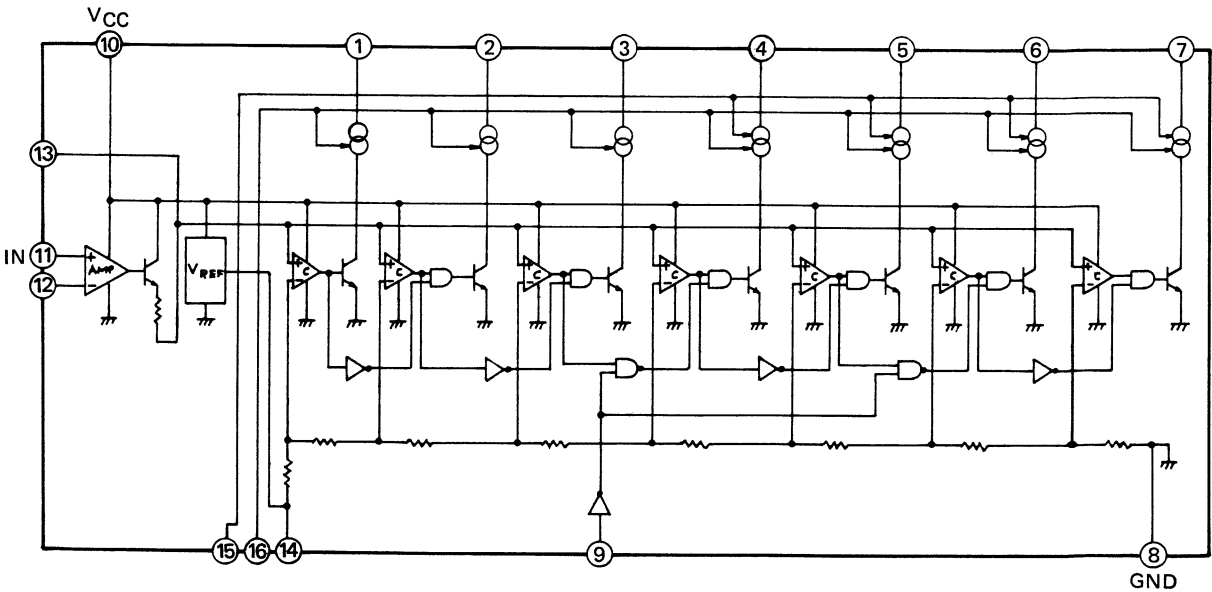
● Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Conditions	Unit
Power voltage	V _{CC}	18	V
Power current	I _{CC}	15	mA
Circuit voltage	V _{I3}	7.5	V
D terminal out current	I _{OUT(D)}	30	mA
R _A terminal input current	I _{IN}	10	mA
Reference voltage output current	I _{REF}	10	mA
Loss allowance	P _D	530	mW
Ambient temperature	T _{opr}	−30~+75	°C
Storage temperature	T _{stg}	−55~+150	°C

● Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Current drain	I _{tot}	V _{CC} =12V, V _{I1} =V _{I3} =0V, R _A =4.7kΩ		5	10	mA
Output offset voltage	V _{I3}	V _{CC} =12V, V _{I1} =0V, V _G =16.5dB			75	mV
Reference voltage	V _{REF}	V _{CC} =6.2V ~ 16V	2.4	2.7	2.9	V
D terminal output current	I _{D1~D7}	V _{CC} =12V, V _{I1} =2.7V	4.2	7.1	10	mA
	I _{D4~D7}	R _A =10kΩ R _G =22kΩ	6.3	10.6	15	mA
Amplifier gain	V _G	V _{CC} =12V, V _{I1} =50mV, R ₁ =18kΩ R ₂ =100kΩ, R ₃ =15kΩ	14.5		18.5	dB
Switching terminal voltage	V _g	V _{CC} =12V	0.45		0.8	V

● Block Diagram



STK6325C (QG17, QG18)

- **Maximum Ratings** ($T_a = 25^{\circ}\text{C}$)

(Tentative)

Item	Symbol	Conditions	Limits	Unit
Max. supply voltage	V _{CC}		+16	V
	V _{EE}		−16	V
Power dissipation	P _d max.	T _a < 60°C	800	mW
Operated temperature	T _{opg}		−20 ~ +70	°C
Storage temperature	T _{stg}		−40 ~ +100	°C

● **Recommended Operating Conditions** ($T_a = 25^\circ$)

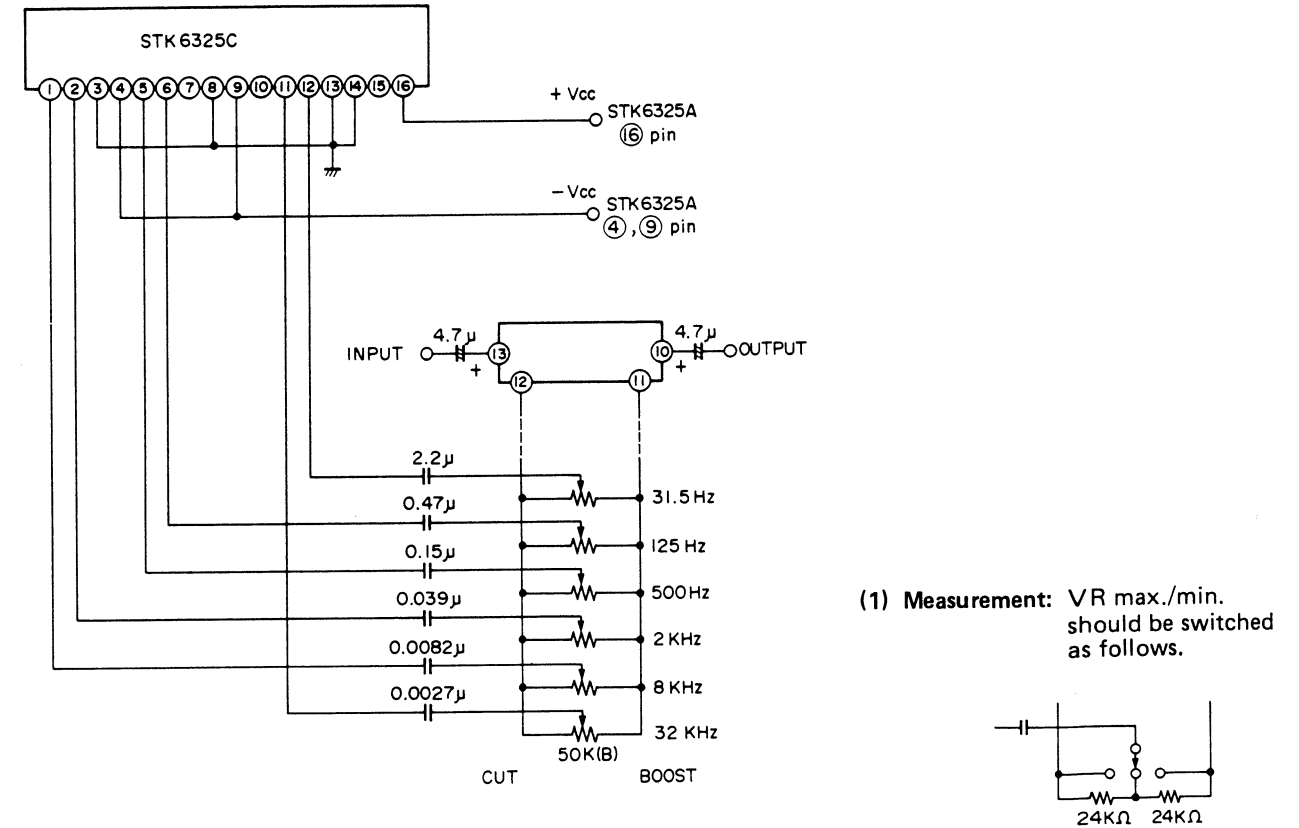
Item	Symbol	Conditions	Limits	Unit
Supply voltage	$\pm V_{CC}$		± 12	V
	V_{CC}	at single power supply	24	V

● **Operating Characteristics** ($T_a = 25^\circ\text{C}$, $V_{CC} = 24\text{V}$, with STK6325A)

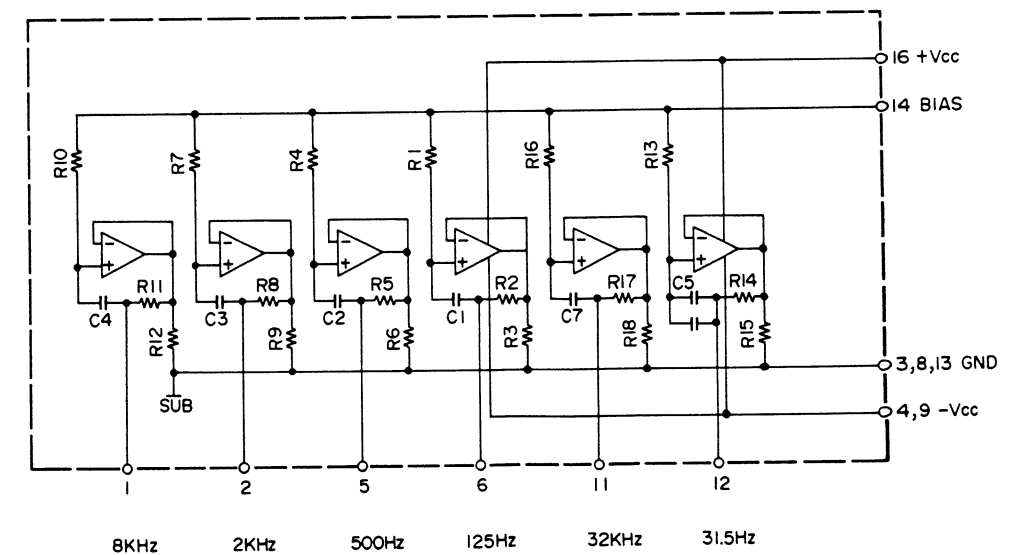
Item	Symbol	Conditions	Limits			Unit
			Min.	Typ.	Max.	
Quiescent current	I _{CCO} (1)	24		18		mA
	I _{CCO} (2)	±12V		7.5	14	mA
Frequency	f (1)	f = 31.5 Hz VR max./min.	±10	±12	±13	dB
	f (2)	f = 125 Hz Vo ref = 0.5V	±10.5	±12	±13	dB
	f (3)	f = 500 Hz	±10.5	±12	±13	dB
	f (4)	f = 2 kHz	±10.5	±12	±13	dB
	f (5)	f = 8 kHz	±10.5	±12	±13	dB
	f (6)	f = 32 kHz	±10.5	±12	±13	dB

Remarks: The above characteristics are based on the specified test circuit.

● STK6325C Test Circuit and Application ($\pm V_{CC}$)



- **STK6325C Equivalent Circuit**



STK6325A (QG15, QG16)

Maximum Ratings (Ta = 25°C)

Item	Symbol	Conditions	Limits	Unit
Max. supply voltage	VCC		+16	V
	VEE		-16	V
Power dissipation	Pd max.	Ta < 60°C	800	mV
Operating temperature	Topg		-20 ~ +70	°C
Storage temperature	Tstg		-40 ~ +100	°C

Recommended Operating Conditions (Ta = 25°)

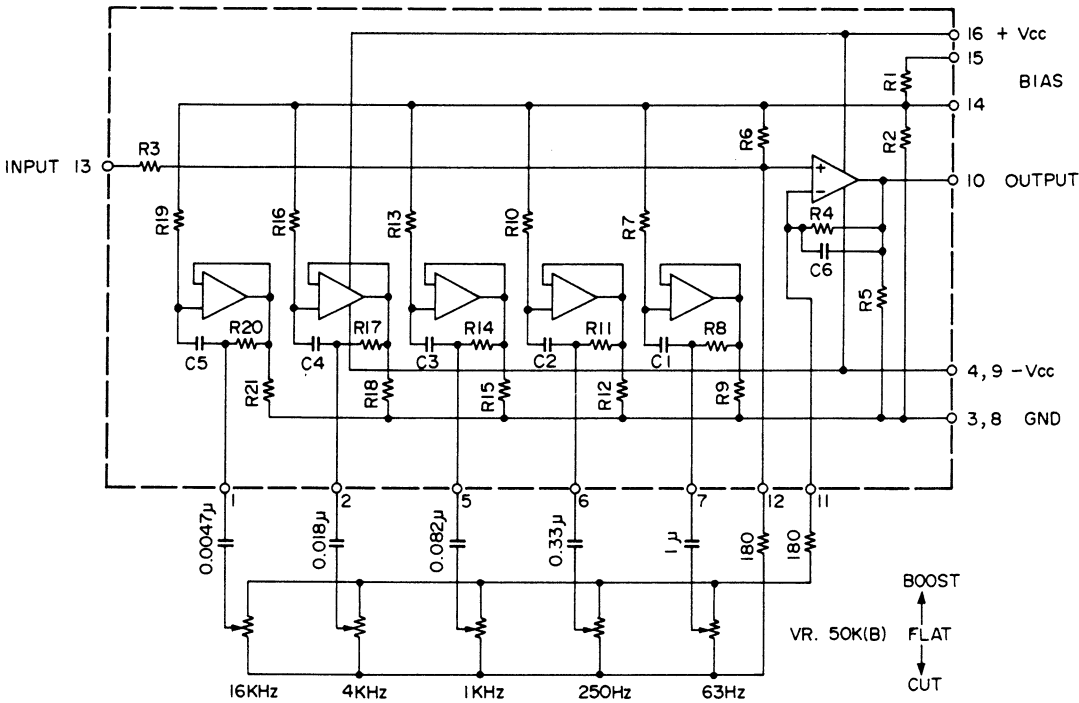
Item	Symbol	Conditions	Limits	Unit
Supply voltage	±VCC		+12	V
	VCC	at single power supply	24	V

Operating Characteristics (Ta = 25°C, VCC = 24V, f = 1 kHz, at FLAT position)

Item	Symbol	Conditions	Limits			Unit
			Min.	Typ.	Max.	
Quiescent current	ICCO (1)	24V		28		mA
	ICCO (2)	±12V		7.5	14	mA
Voltage gain	VG		-1	0	+1	dB
Output voltage	VO	THD = 1%	6.3	7.4		Vrms
Total harmonic dis.	THD	VO = 1V		0.01	0.02	%
Output noise voltage	VNO	Rg = 0Ω		0.1	0.3	mVrms
Frequency	f (1)	f = 63 Hz VR max./min.	±10	±12	±13	dB
	f (2)	f = 250 Hz Vo ref = 0.5V	±10.5	±12	±13	dB
	f (3)	f = 1 kHz	±10.5	±12	±13	dB
	f (4)	f = 4 kHz	±10.5	±12	±13	dB
	f (5)	f = 16 kHz	±10.5	±12	±13	dB
Input resistance	ri			10k		Ω
Output resistance	ro			200		Ω

Remarks: The above characteristics are based on the specified test circuit.

STK6325A Equivalent Circuit and Application



2. ALIGNMENT

In BBD circuit, there is a adjustment point in order to minimize a distortion. When the IC (QE14, QE16, QE17, or QE19) in this circuit is changed, alignment must be done as following method.

a) In case of microphone block

Connect 1 kHz, 2.5 mV to the microphone jack 1.

Turn on the ON/OFF switch, ECHO/CHORUS of the microphone.

Connect a distortion meter or oscilloscope between TP1 and TP2 and adjust the trimmer resistor RF35 (100 k ohm) so as for distortion to become minimum.

b) In case of line block

Connect 1 kHz, 150 mV to the line-in jack.

Turn on the ON/OFF switch, ECHO/CHORUS of the LINE/TAPE.

Connect a distortion meter or oscilloscope between TP3 and TP2 and adjust the trimmer resistor RF57 (100 k ohm) so as for distortion to become minimum.

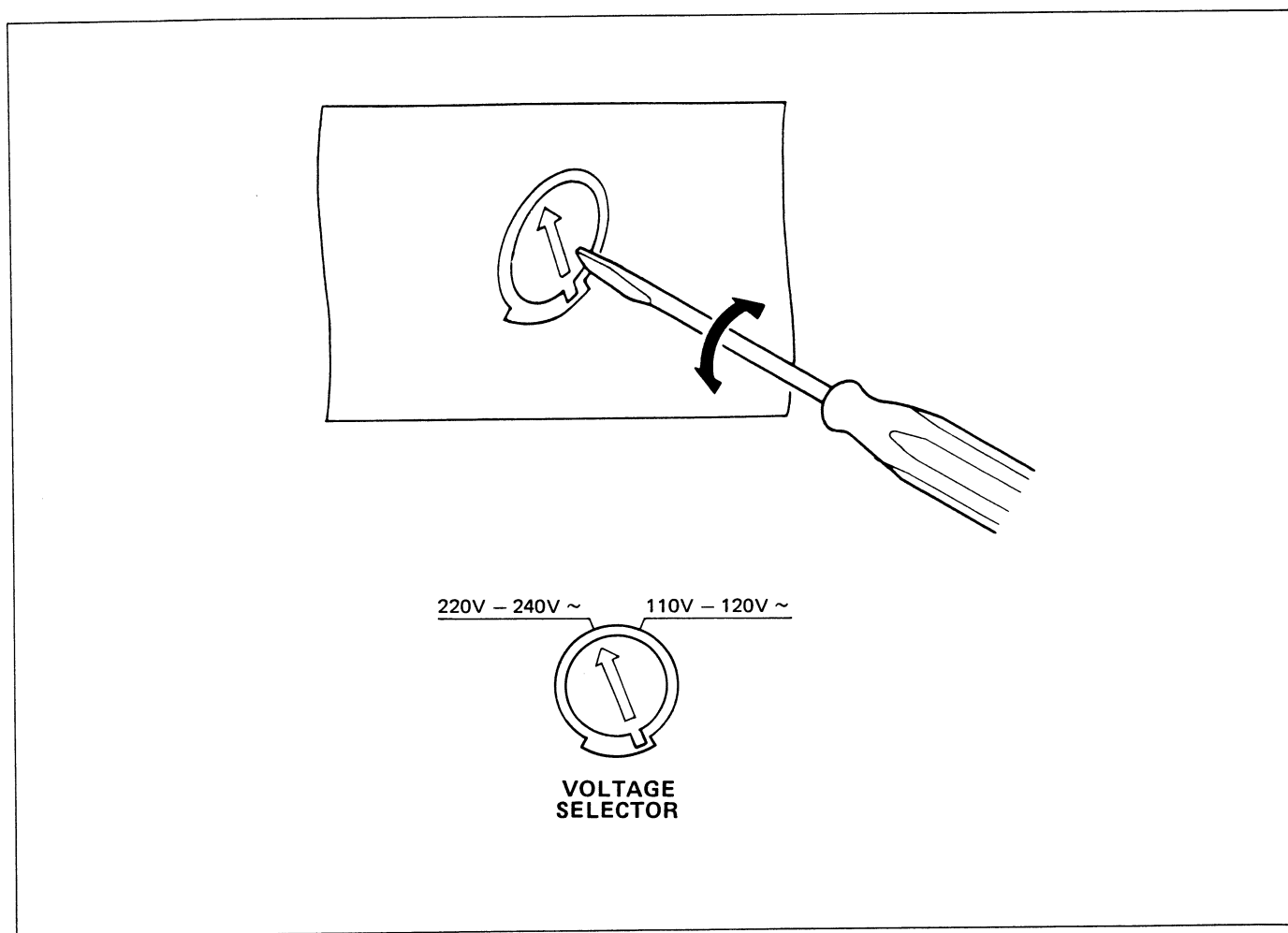
3. VOLTAGE CONVERSION

• EUROPEAN MODEL ONLY

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

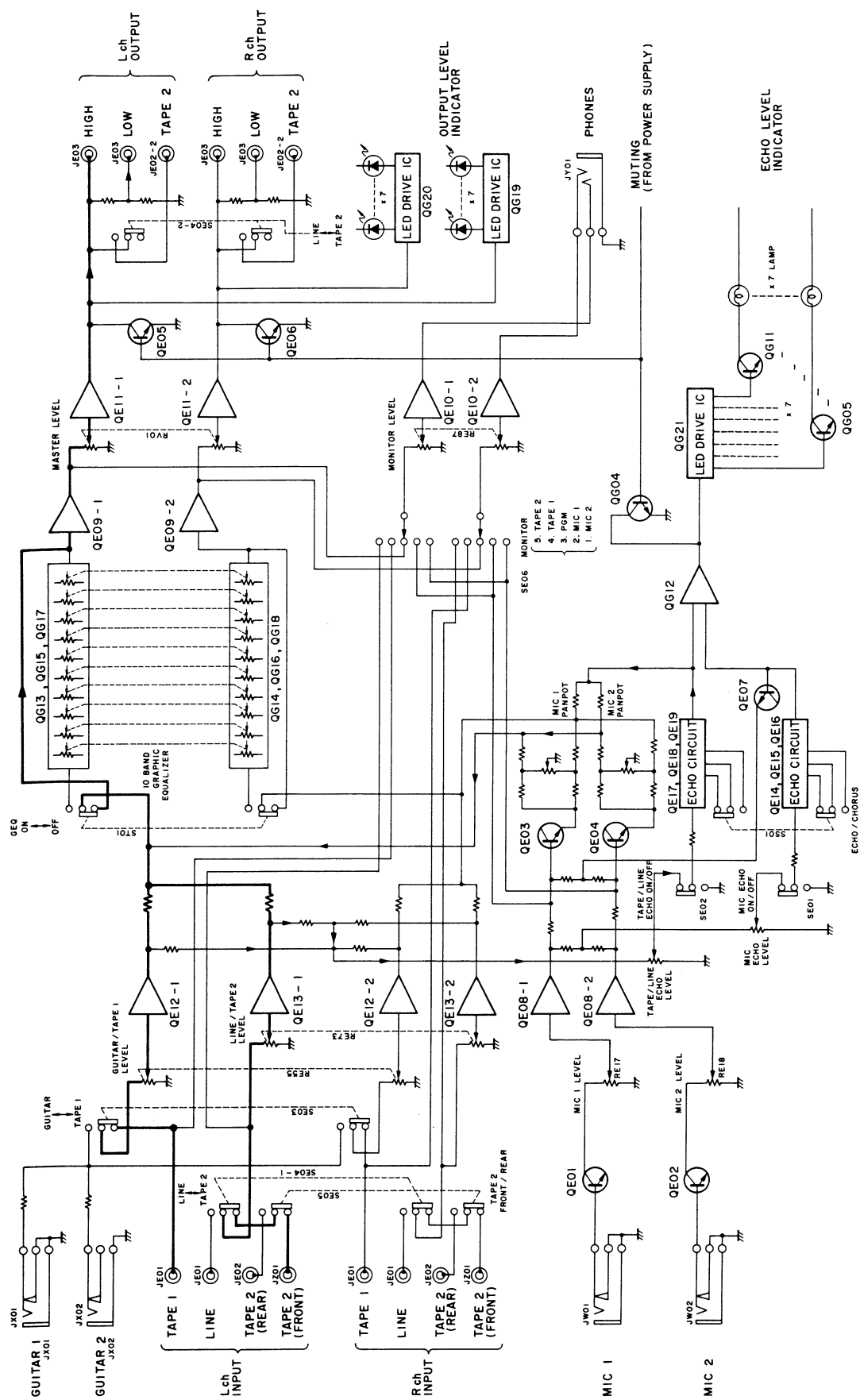
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC
OUTLET BEFORE CONVERTING VOLTAGE.

Voltage Conversion Chart



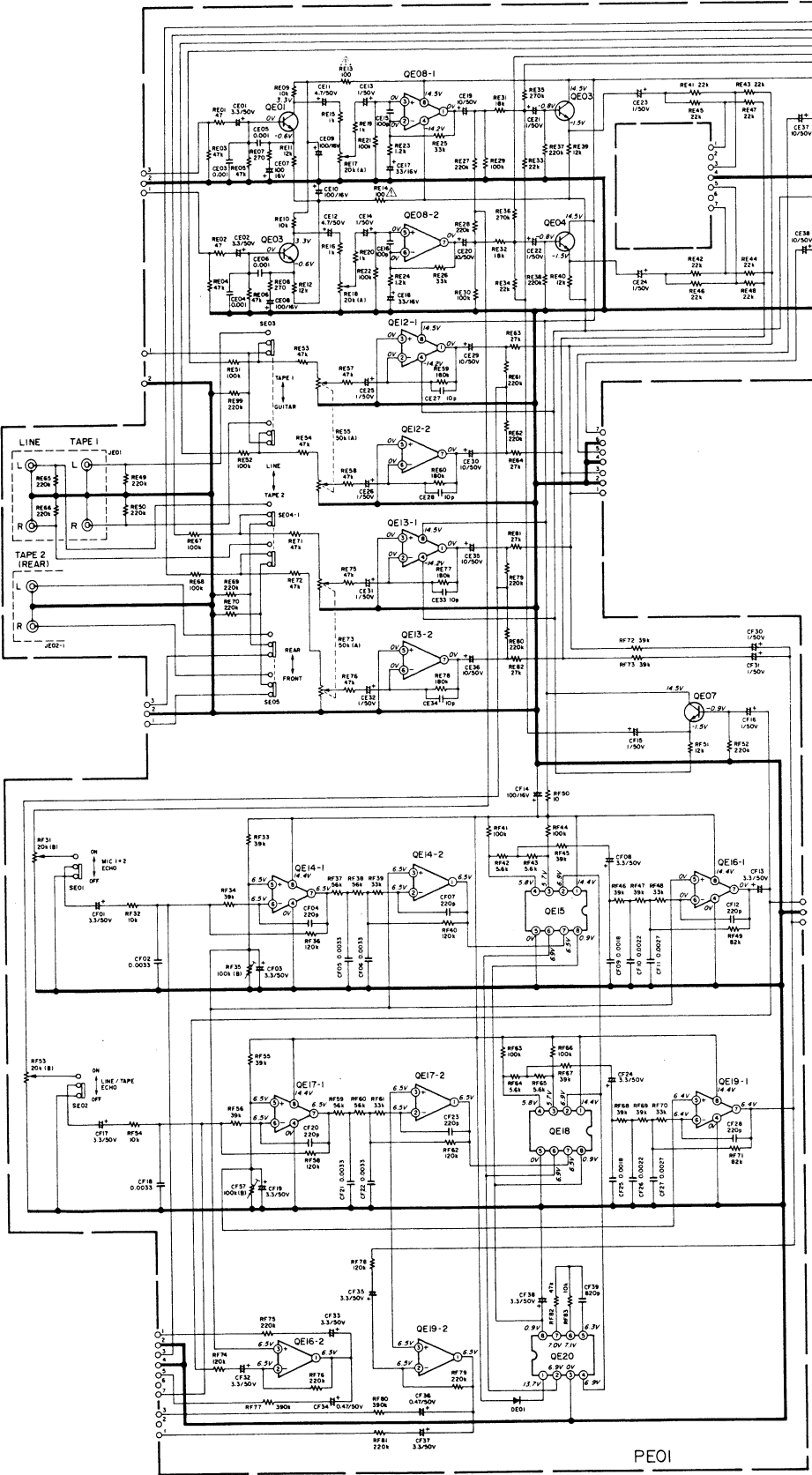
Note on safety: Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

4. BLOCK DIAGRAM

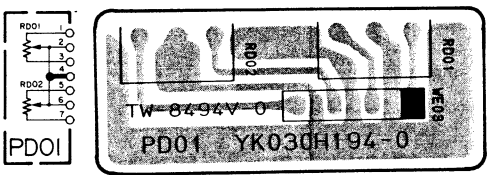


5. DIAGRAM AND COMPONENT LOCATIONS

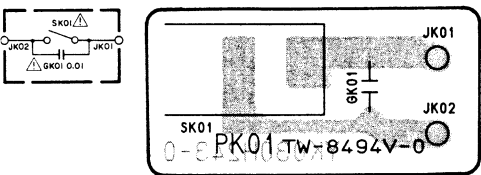
5.1 Mic Echo Mixing Assembly (PE01) Schematic Diagram and Component Locations



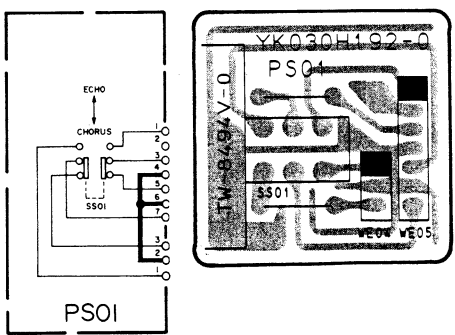
5.2 Pan Pot Volume Assembly (PD01) Schematic Diagram and Component Locations



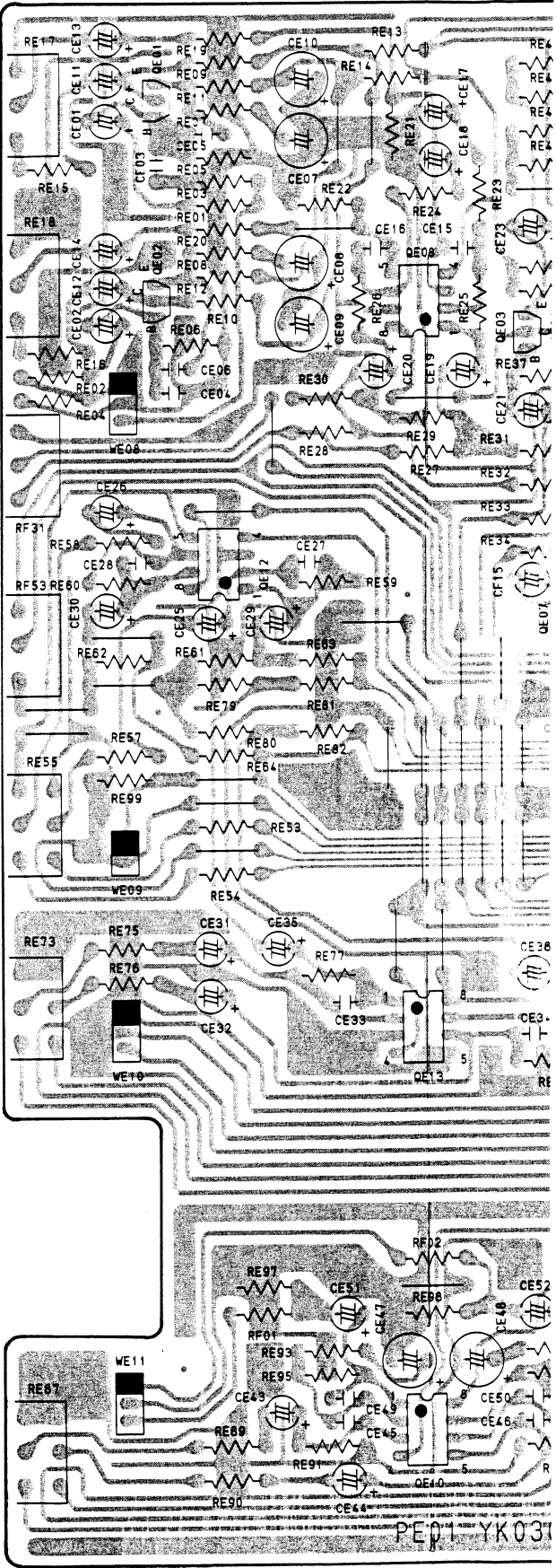
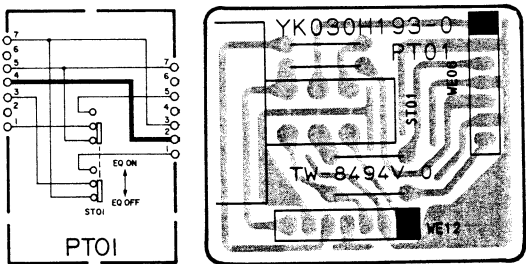
5.4 Power Switch Assembly (PK01) Schematic Diagram and Component Locations

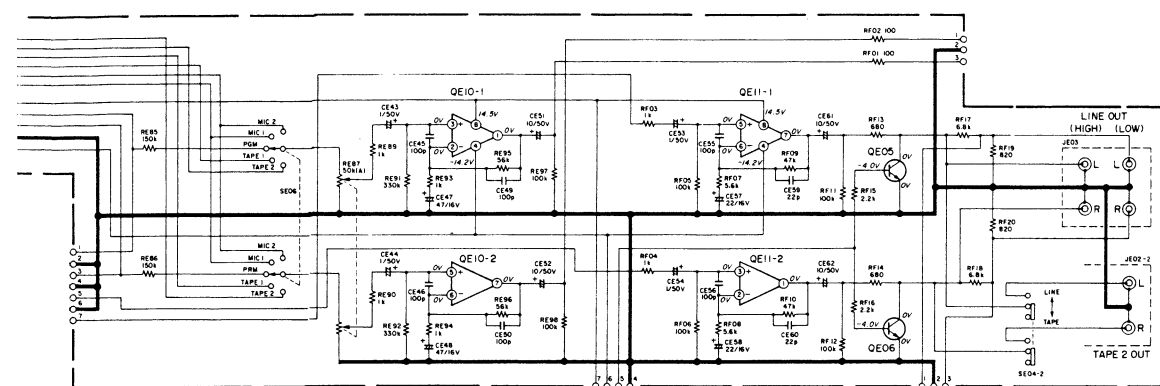


5.3 Chorus/Echo Switch Assembly (PS01) Schematic Diagram and Component Locations

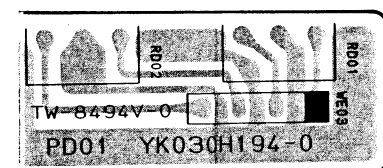


5.5 Equalizer Switch Assembly (PT01) Schematic Diagram and Component Locations

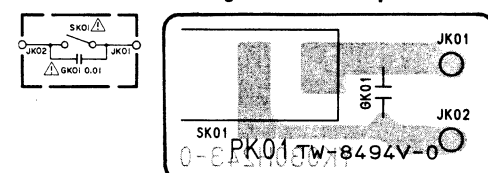




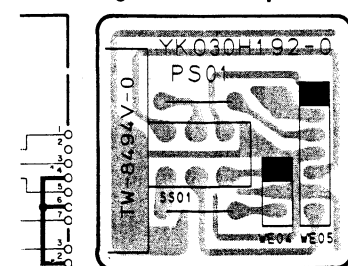
ot Volume Assembly (PD01)
natic Diagram and Component Locations



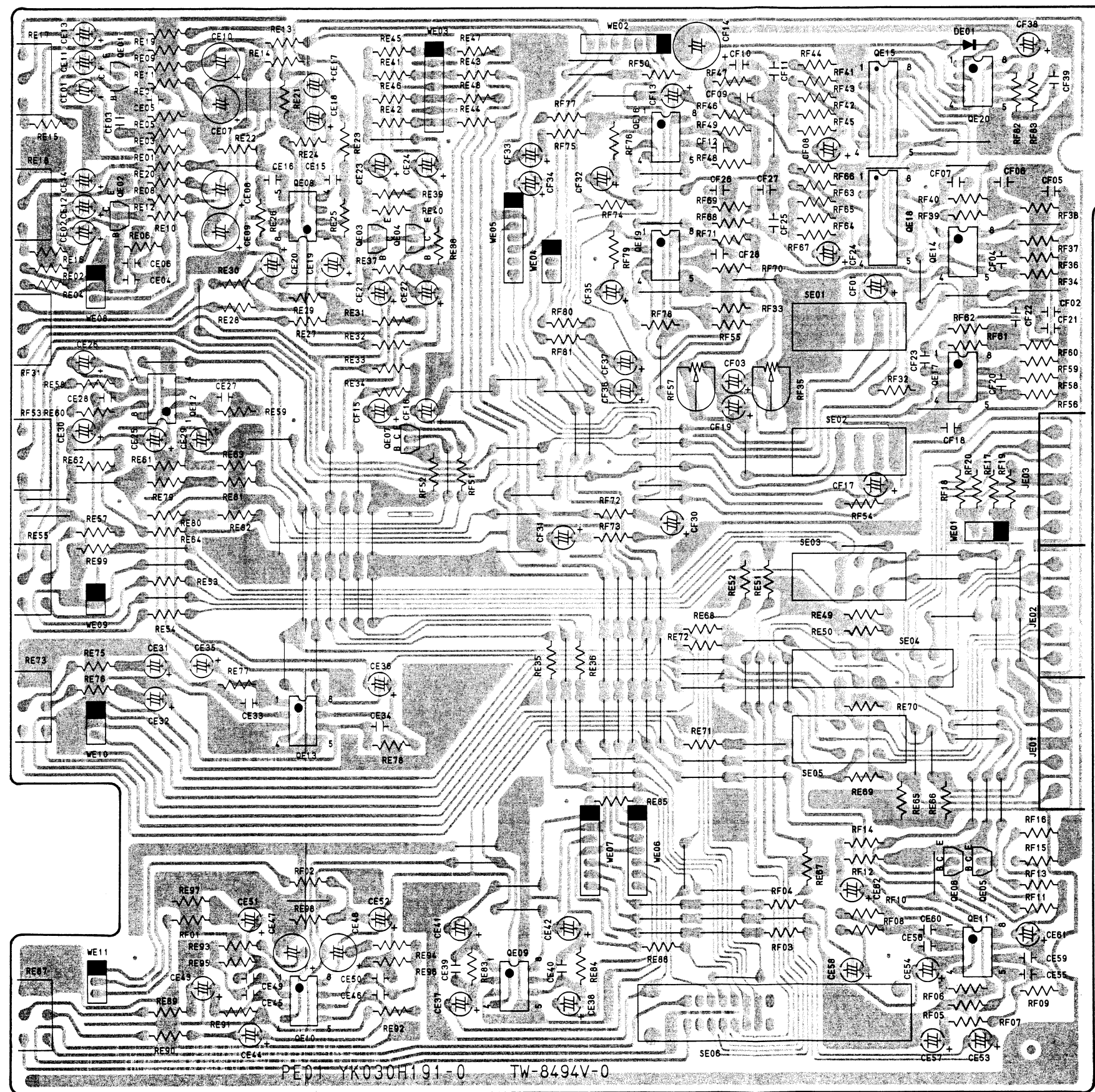
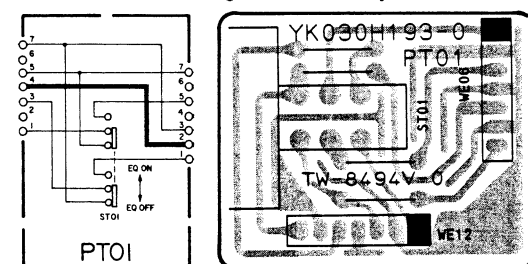
5.4 Power Switch Assembly (PK01)
Schematic Diagram and Component Locations



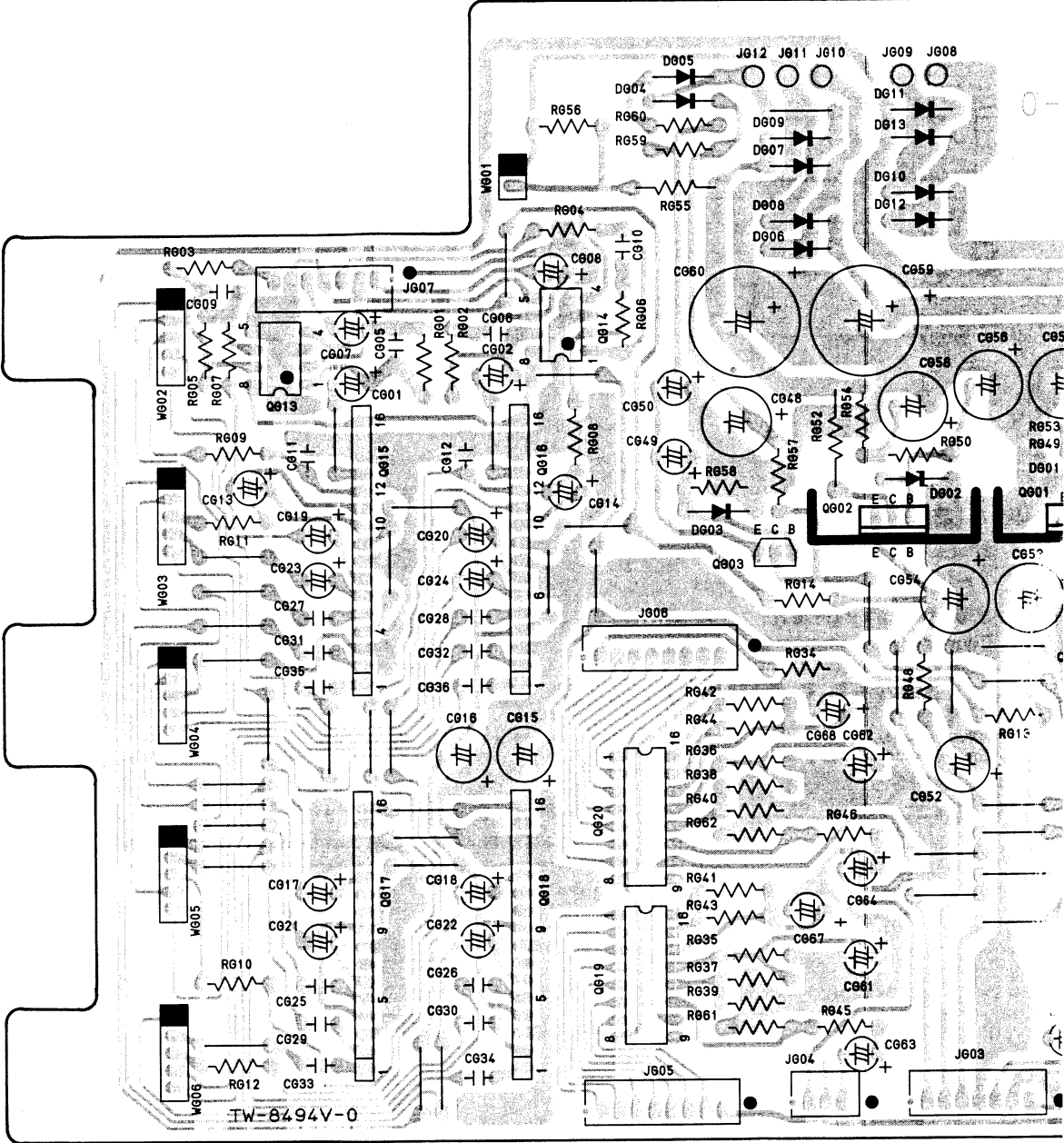
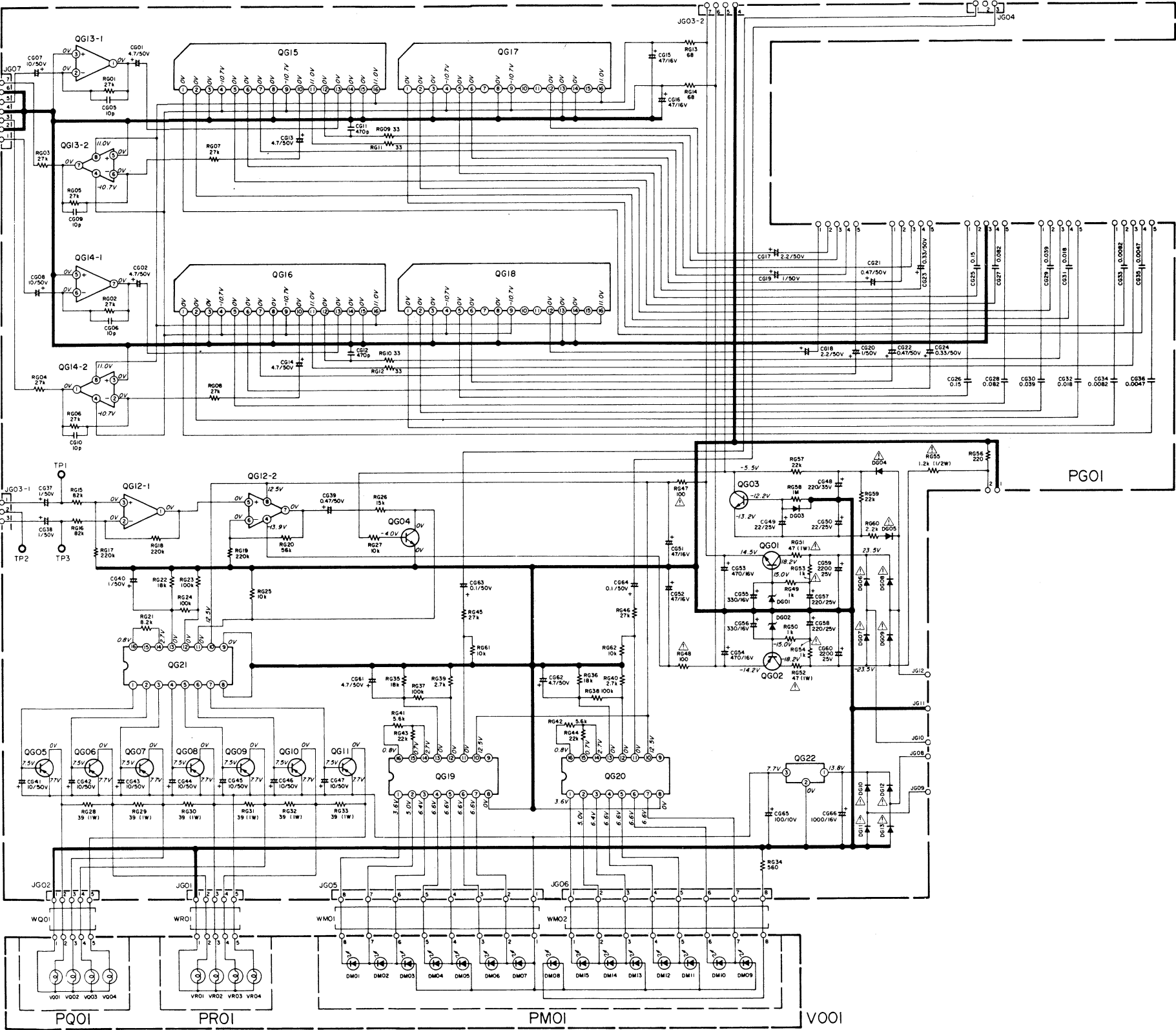
is/Echo Switch Assembly (PS01)
natic Diagram and Component Locations



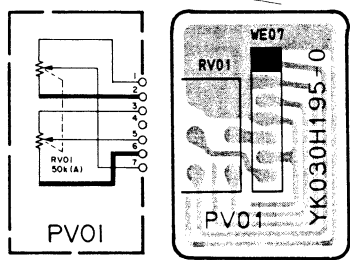
5.5 Equalizer Switch Assembly (PT01)
Schematic Diagram and Component Locations



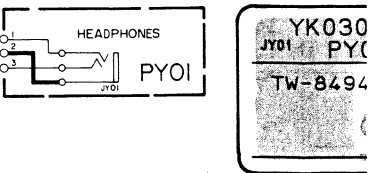
5.6 EQ. Display/Power Supply Assembly (PG01) Schematic Diagram and Component Locations

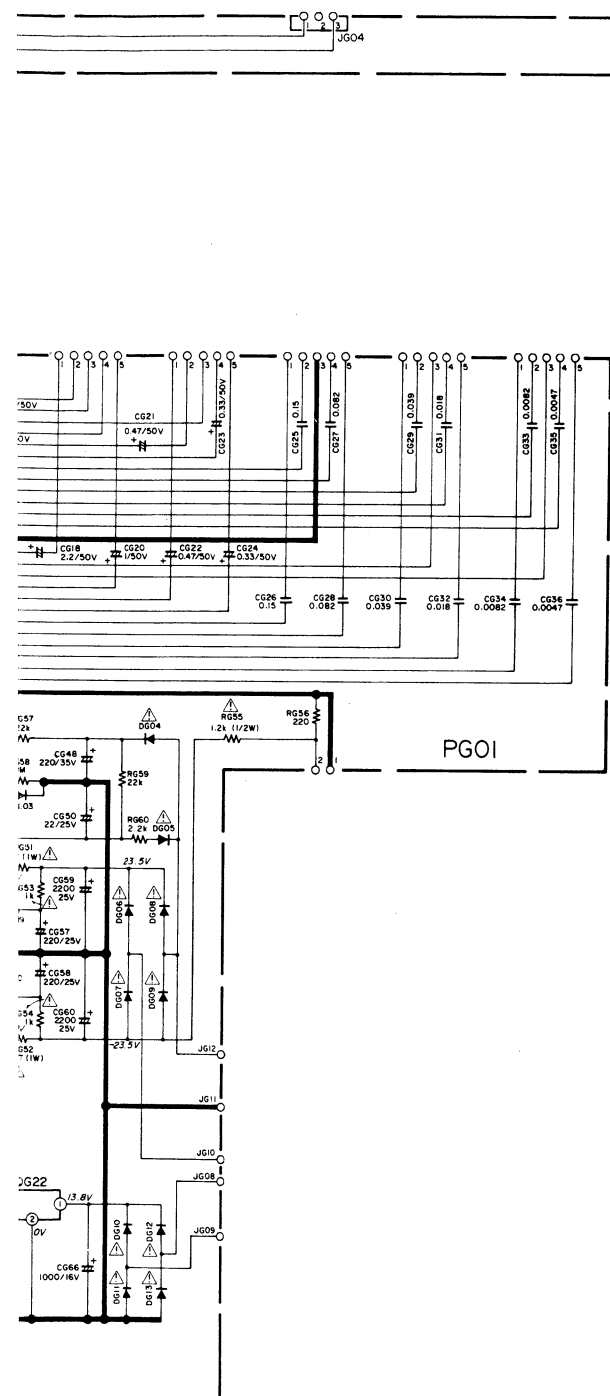


5.7 Master Volume Assembly (PV01) Schematic Diagram and Component Locations

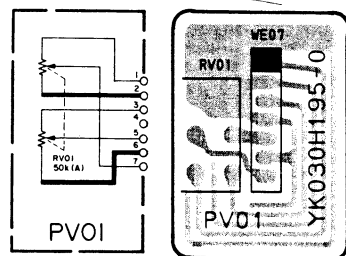


5.8 Headphone Jack Assembly (PY01) Schematic Diagram and Component Locations

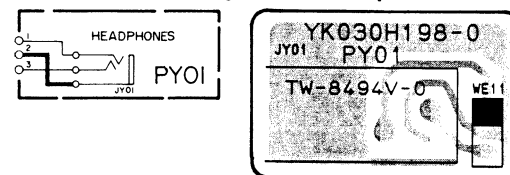




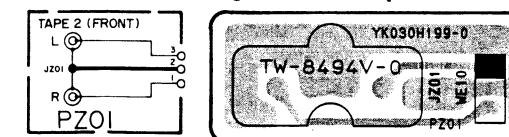
5.7 Master Volume Assembly (PV01)
Schematic Diagram and Component Locations



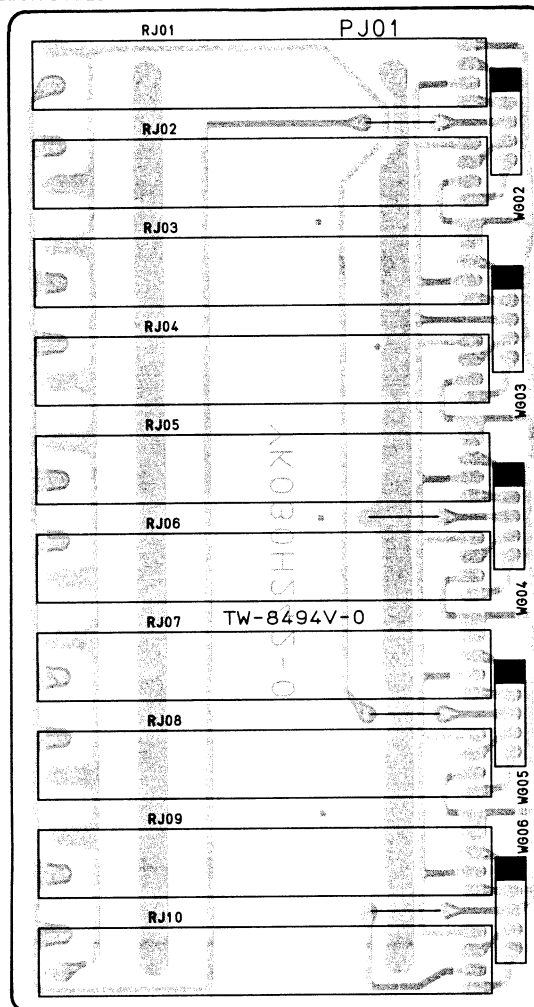
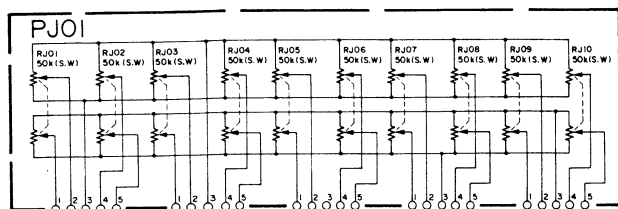
5.8 Headphone Jack Assembly (PY01)
Schematic Diagram and Component Locations



5.9 Pin Jack Assembly (PZ01)
Schematic Diagram and Component Locations

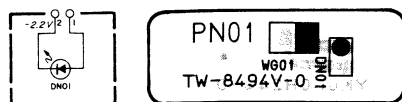


5.10 Equalizer Volume Assembly (PJ01) Schematic Diagram and Component Locations



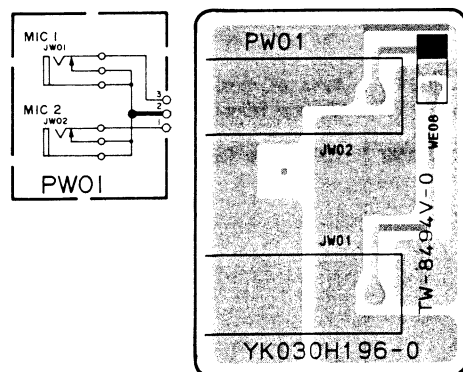
5.11 LED Assembly (PN01)

Schematic Diagram and Component Locations



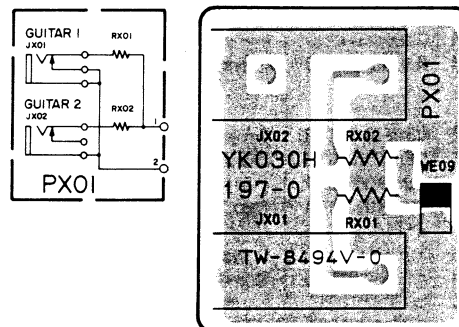
5.12 Mic Jack Assembly (PW01)

Schematic Diagram and Component Locations

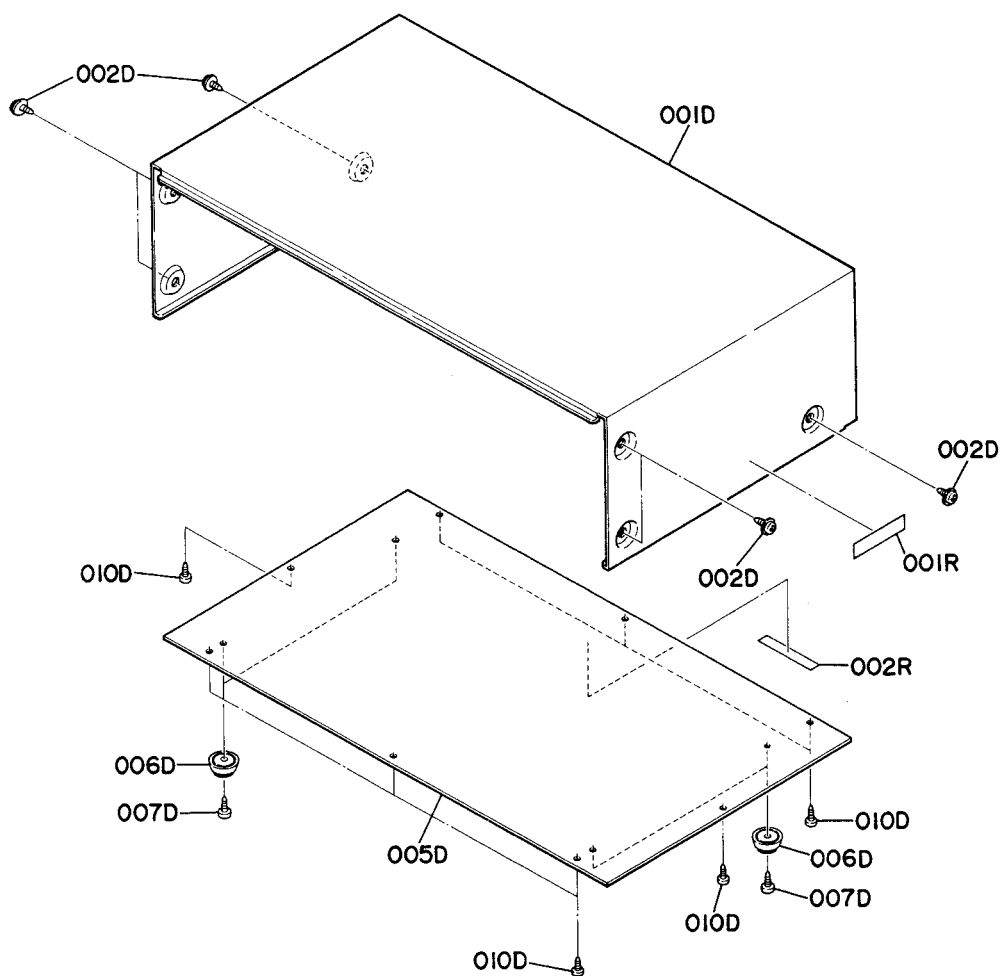


5.13 Guitar Jack Assembly (PX01)

Schematic Diagram and Component Locations



● [C02-99] Lid

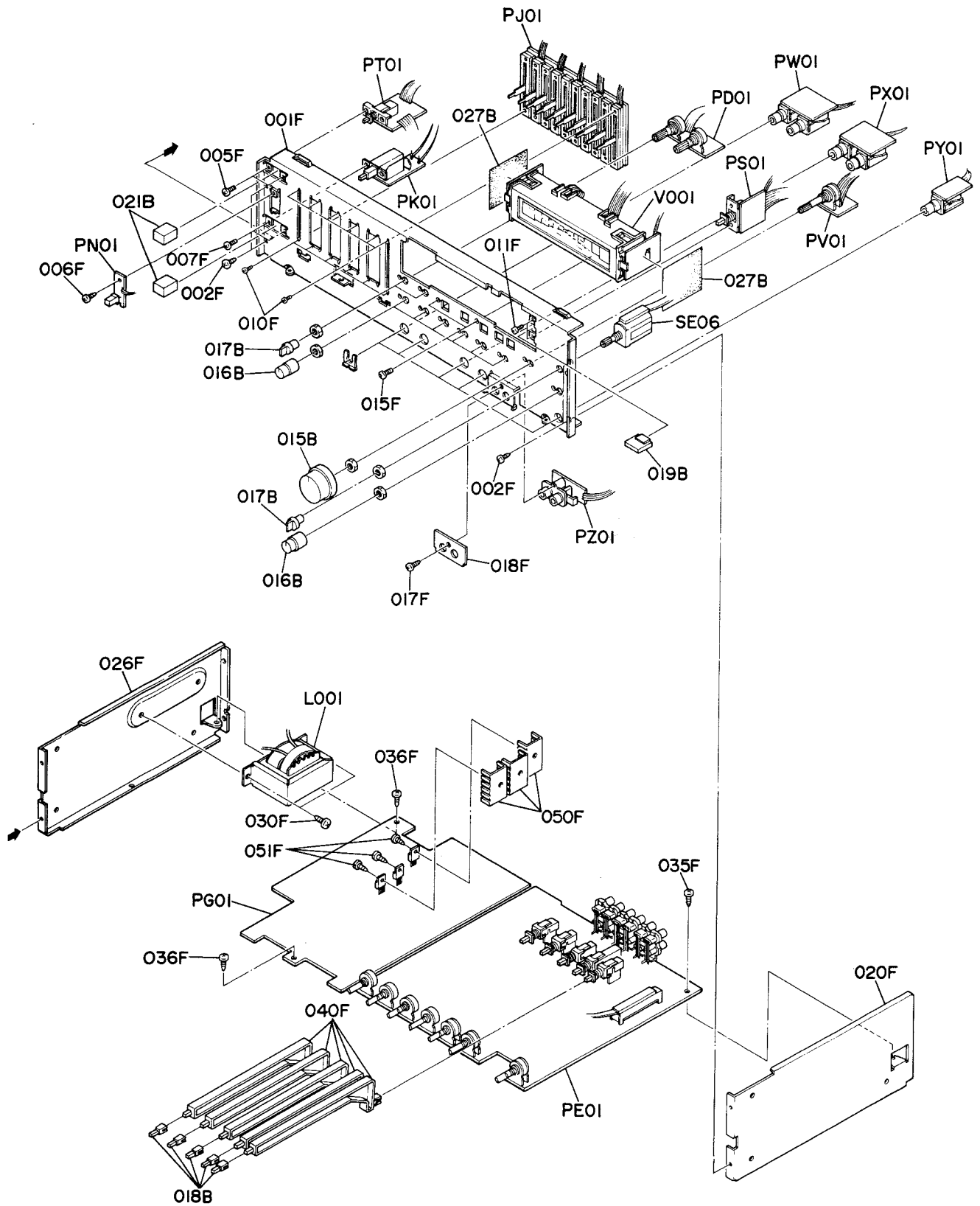


● (F): for Japan
● (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
001D	1	1	030H257110	Lid, Top Cover (Black)
001D	1	1	030H257010	Lid, Top Cover (Gold)
002D	6	6	51260408U0	B.T. Screw B4 x 8
005D	1	1	030H257020	Lid, Bottom Cover
006D	4	4	416H057010	Leg
007D	4	4	51280408B0	B.H. Tapped Screw B4 x 8
010D	8	8	51280308B0	B.H. Tapped Screw B3 x 8

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
001R	1	1	2911861140	Label (Gold)
002R	1	1	2911861110	Label (Black)

● [P01-99] Front Chassis and General Parts

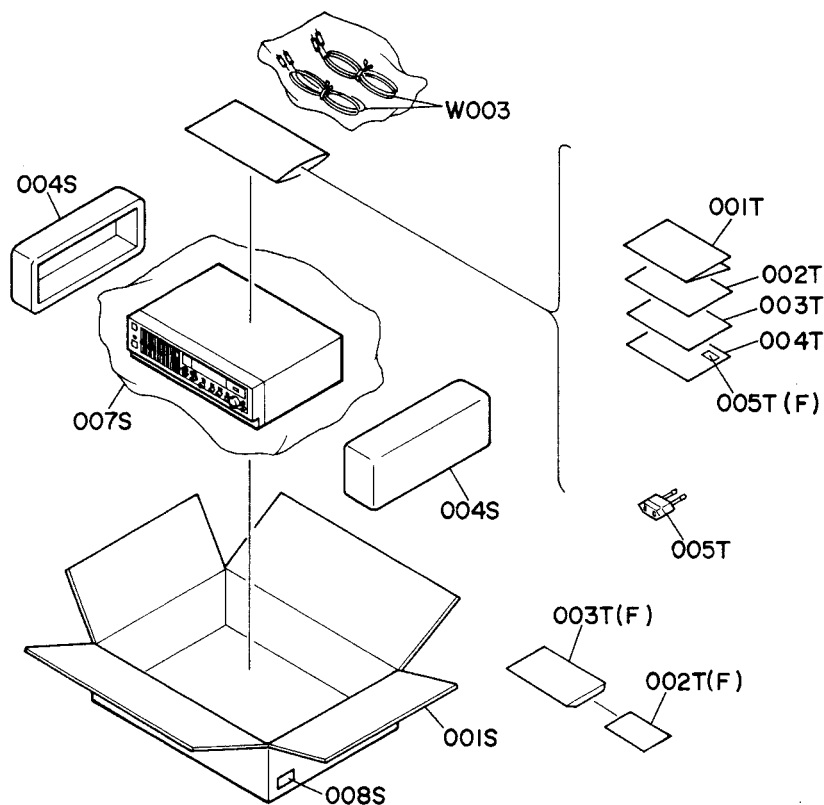


- (F): for Japan
- (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
015B	1	1	030H154140	Knob, Master Level (Black)
015B	1	1	030H154040	Knob, Master Level (Gold)
016B	7	7	030H154130	Knob, Level (Black)
016B	7	7	030H154030	Knob, Level (Gold)
017B	3	3	102T154130	Knob, Pan Pot (Black)
017B	3	3	102T154030	Knob, Pan Pot (Gold)
018B	5	5	030H154120	Knob, Mode (Black)
018B	5	5	030H154020	Knob, Mode (Gold)
019B	1	1	226H154230	Knob, Echo (Black)
019B	1	1	226H154130	Knob, Echo (Gold)
021B	2	2	415H154310	Knob, Power/EQ (Black)
021B	2	2	415H154210	Knob, Power/EQ (Gold)
027B	1	1	030H303020	Mask
001F	1	1	030H160010	Bracket, Front Chassis
002F	4	4	51280308B0	B.H. Tapped Screw B3 x 8
005F	2	2	51100308A9	B.H.M. Screw B3 x 8
006F	1	1	51280308B0	B.H. Tapped Screw B3 x 8
007F	2	2	51100308A9	B.H.M. Screw B3 x 8
010F	10	10	51100203S0	B.H.M. Screw B2 x 3
011F	2	2	51100308A9	B.H.M. Screw B3 x 8
015F	2	2	51280308B0	B.H. Tapped Screw B3 x 8
017F	1	1	51280308B0	B.H. Tapped Screw B3 x 8
018F	1	1	030H107010	Sheet

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
020F	1	1	030H126010	Stay, R
026F	1	1	030H126020	Stay, L
030F	2	2	51280408B0	B.H. Tapped Screw B4 x 8
035F	1	1	51280308B0	B.H. Tapped Screw B3 x 8
036F	2	2	51280308B0	B.H. Tapped Screw B3 x 8
040F	5	5	030H125010	Joint, Push Switch
050F	3	3	202H267030	Heatsink
051F	3	3	51280308B0	B.H. Tapped Screw B3 x 8
ΔL001	1		TS15709020	Power Transformer
ΔL001	1		TS15709030	Power Transformer
V001	1	1	ZK030H0010	Display Unit, LED/Meter

● [H01-99] Packing Materials



● (F): for Japan
● (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
001S	1		030H801010	Packing Case
001S	1		030H801020	Packing Case
004S	2	2	030H809010	Cushion
007S	1	1	9090808030	Polyethylene Sheet
008S	4		9526019040	Serial No. Card
008S		2	9526019050	Serial No. Card

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
001T	1		030H851110	User Manual
001T	1	1	030H851310	User Manual
002T	1		9631000130	Warranty Card
002T	1	1	030H851320	User Manual, Spec
003T	1		128T854010	Warranty Card
003T	1	1	416H854010	Warranty Card
004T	1		9611000050	User's Card
004T	1	1	3435851210	User Manual
005T	1		9540000010	License
005T	1	1	YJ04000240	Jack, AC Socket
W003	2	2	ZD01000170	Connective Cord

7. ELECTRICAL PARTS LIST

• (F): for Japan
• (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION		
	F	P				
PD01	1	1	YK030H1940	PD01-PAN POT VOLUME CIRCUIT BOARD		
			ZZ030H1940	P.W. Board, Pan Pot Volume		
				P.W. Board Assembly		
RD01	1	1	RK02030640	Resistor	20K Ω (B), Variable	
RD02	1	1	RK02030640	Resistor	20K Ω (B), Variable	
PE01	1	1	YK030H1910	PE01-MIC, ECHO & MIXING CIRCUIT BOARD		
			ZZ030H1910	P.W. Board, Mic Echo & Mixing		
				P.W. Board Assembly		
CE01	1	1	EA33505030	Elect	3.3 μ F	50V
CE02	1	1	EA33505030	Elect	3.3 μ F	50V
CE03	1	1	DK16102300	Ceramic	1000pF	$\pm 10\%$
CE04	1	1	DK16102300	Ceramic	1000pF	$\pm 10\%$
CE05	1	1	DK16102300	Ceramic	1000pF	$\pm 10\%$
CE06	1	1	DK16102300	Ceramic	1000pF	$\pm 10\%$
CE07	1	1	EA10701630	Elect	100 μ F	16V
CE08	1	1	EA10701630	Elect	100 μ F	16V
CE09	1	1	EA10701630	Elect	100 μ F	16V
CE10	1	1	EA10701630	Elect	100 μ F	16V
CE11	1	1	EA47505030	Elect	4.7 μ F	50V
CE12	1	1	EA47505030	Elect	4.7 μ F	50V
CE13	1	1	EA10505030	Elect	1 μ F	50V
CE14	1	1	EA10505030	Elect	1 μ F	50V
CE15	1	1	DD15101370	Ceramic	100pF	$\pm 5\%$
CE16	1	1	DD15101370	Ceramic	100pF	$\pm 5\%$
CE17	1	1	EA33601630	Elect	33 μ F	16V
CE18	1	1	EA33601630	Elect	33 μ F	16V
CE19	1	1	EA10605030	Elect	10 μ F	50V
CE20	1	1	EA10605030	Elect	10 μ F	50V
CE21	1	1	EA10505030	Elect	1 μ F	50V
CE22	1	1	EA10505030	Elect	1 μ F	50V
CE23	1	1	EA10505030	Elect	1 μ F	50V
CE24	1	1	EA10505030	Elect	1 μ F	50V
CE25	1	1	EA10505030	Elect	1 μ F	50V
CE26	1	1	EA10505030	Elect	1 μ F	50V
CE27	1	1	DD11100370	Ceramic	10pF	50V
CE28	1	1	DD11100370	Ceramic	10pF	50V
CE29	1	1	EA10605030	Elect	10 μ F	50V
CE30	1	1	EA10605030	Elect	10 μ F	50V
CE31	1	1	EA10505030	Elect	1 μ F	50V
CE32	1	1	EA10505030	Elect	1 μ F	50V
CE33	1	1	DD11100370	Ceramic	10pF	50V
CE34	1	1	DD11100370	Ceramic	10pF	50V
CE35	1	1	EA10605030	Elect	10 μ F	50V
CE36	1	1	EA10605030	Elect	10 μ F	50V
CE37	1	1	EA10605030	Elect	10 μ F	50V
CE38	1	1	EA10605030	Elect	10 μ F	50V
CE39	1	1	DD11100370	Ceramic	10pF	50V
CE40	1	1	DD11100370	Ceramic	10pF	50V

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION		
	F	P				
CE41	1	1	EA10605030	Elect	10 μ F	50V
CE42	1	1	EA10605030	Elect	10 μ F	50V
CE43	1	1	EA10505030	Elect	1 μ F	50V
CE44	1	1	EA10505030	Elect	1 μ F	50V
CE45	1	1	DD15101370	Ceramic	100pF	$\pm 5\%$
CE46	1	1	DD15101370	Ceramic	100pF	$\pm 5\%$
CE47	1	1	EA47601630	Elect	47 μ F	16V
CE48	1	1	EA47601630	Elect	47 μ F	16V
CE49	1	1	DD15101370	Ceramic	100pF	50V
CE50	1	1	DD15101370	Ceramic	100pF	50V
CE51	1	1	EA10605030	Elect	10 μ F	50V
CE52	1	1	EA10605030	Elect	10 μ F	50V
CE53	1	1	EA10505030	Elect	1 μ F	50V
CE54	1	1	EA10505030	Elect	1 μ F	50V
CE55	1	1	DD15101370	Ceramic	100pF	50V
CE56	1	1	DD15101370	Ceramic	100pF	50V
CE57	1	1	EA22601630	Elect	22 μ F	16V
CE58	1	1	EA22601630	Elect	22 μ F	16V
CE59	1	1	DD15220370	Ceramic	22pF	$\pm 5\%$
CE60	1	1	DD15220370	Ceramic	22pF	$\pm 5\%$
CE61	1	1	EA10605030	Elect	10 μ F	50V
CE62	1	1	EA10605030	Elect	10 μ F	50V
CF01	1	1	EA33505030	Elect	3.3 μ F	50V
CF02	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF03	1	1	EA33505030	Elect	3.3 μ F	50V
CF04	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF05	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF06	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF07	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF08	1	1	EA33505030	Elect	3.3 μ F	50V
CF09	1	1	DF15182310	Film	1800pF	$\pm 5\%$
CF10	1	1	DF15222310	Film	2200pF	$\pm 5\%$
CF11	1	1	DF15272310	Film	2700pF	50V
CF12	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF13	1	1	EA33505030	Elect	3.3 μ F	50V
CF15	1	1	EA10505030	Elect	1 μ F	50V
CF16	1	1	EA10505030	Elect	1 μ F	50V
CF17	1	1	EA33505030	Elect	3.3 μ F	50V
CF18	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF19	1	1	EA33505030	Elect	3.3 μ F	50V
CF20	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF21	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF22	1	1	DF15332310	Film	3300pF	$\pm 5\%$
CF23	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF24	1	1	EA33505030	Elect	3.3 μ F	50V
CF25	1	1	DF15182310	Film	1800pF	$\pm 5\%$
CF26	1	1	DF15222310	Film	2200pF	$\pm 5\%$
CF27	1	1	DF15272310	Film	2700pF	$\pm 5\%$
CF28	1	1	DD15221370	Ceramic	220pF	$\pm 5\%$
CF30	1	1	EA10505030	Elect	1 μ F	50V
CF31	1	1	EA10505030	Elect	1 μ F	50V
CF32	1	1	EA33505030	Elect	3.3 μ F	50V
CF33	1	1	EA33505030	Elect	3.3 μ F	50V
CF34	1	1	EA47405030	Elect	0.47 μ F	50V
CF35	1	1	EA33505030	Elect	3.3 μ F	50V
CF37	1	1	EA47405030	Elect	0.47 μ F	50V
CF37	1	1	EA33505030	Elect	3.3 μ F	50V
CF38	1	1	EA33505030	Elect	3.3 μ F	50V
CF39	1	1	DK16821300	Ceramic	820pF	$\pm 10\%$

• (F): for Japan
• (P): for PX

REF. DESIG.	QTY		PART NO.	DESCRIPTION
	F	P		
				PE01-RESISTORS (All Resistors are $\pm 5\%$ & $\frac{1}{4}W$)
RE01	1	1	GD05470140	47 Ω
RE02	1	1	GD05470140	47 Ω
RE03	1	1	GD05473140	47K Ω
RE04	1	1	GD05473140	47K Ω
RE05	1	1	GD05473140	47K Ω
RE06	1	1	GD05473140	47K Ω
RE07	1	1	GD05271140	270 Ω
RE08	1	1	GD05271140	270 Ω
RE09	1	1	GD05103140	10K Ω
RE10	1	1	GD05103140	10K Ω
RE11	1	1	GD05123140	12K Ω
RE12	1	1	GD05123140	12K Ω
RE13	1	1	GG05101140	100 Ω
RE14	1	1	GG05101140	100 Ω
RE15	1	1	GD05102140	1K Ω
RE16	1	1	GD05102140	1K Ω
RE17	1	1	RK02030630	20K Ω (A), Variable
RE18	1	1	RK02030630	20K Ω (A), Variable
RE19	1	1	GD05102140	1K Ω
RE20	1	1	GD05102140	1K Ω
RE21	1	1	GD05104140	100K Ω
RE22	1	1	GD05104140	100K Ω
RE23	1	1	GD05122140	1.2K Ω
RE24	1	1	GD05122140	1.2K Ω
RE25	1	1	GD05333140	33K Ω
RE26	1	1	GD05333140	33K Ω
RE27	1	1	GD05224140	220K Ω
RE28	1	1	GD05224140	220K Ω
RE29	1	1	GD05104140	100K Ω
RE30	1	1	GD05104140	100K Ω
RE31	1	1	GD05183140	18K Ω
RE32	1	1	GD05183140	18K Ω
RE33	1	1	GD05223140	22K Ω
RE34	1	1	GD05223140	22K Ω
RE35	1	1	GD05274140	270K Ω
RE36	1	1	GD05274140	270K Ω
RE37	1	1	GD05224140	220K Ω
RE38	1	1	GD05224140	220K Ω
RE39	1	1	GD05123140	12K Ω
RE40	1	1	GD05123140	12K Ω
RE41	1	1	GD05223140	22K Ω
RE42	1	1	GD05223140	22K Ω
RE43	1	1	GD05223140	22K Ω
RE44	1	1	GD05223140	22K Ω
RE45	1	1	GD05223140	22K Ω
RE46	1	1	GD05223140	22K Ω
RE47	1	1	GD05223140	22K Ω
RE48	1	1	GD05223140	22K Ω
RE49	1	1	GD05224140	220K Ω
RE50	1	1	GD05224140	220K Ω
RE51	1	1	GD05104140	100K Ω
RE52	1	1	GD05104140	100K Ω
RE53	1	1	GD05473140	47K Ω
RE54	1	1	GD05473140	47K Ω
RE55	1	1	RM05031130	50K Ω (A), Variable
RE57	1	1	GD05473140	47K Ω
RE58	1	1	GD05473140	47K Ω
RE59	1	1	GD05184140	180K Ω
RE60	1	1	GD05184140	180K Ω
RE61	1	1	GD05224140	220K Ω

REF. DESIG.	QTY		PART NO.	DESCRIPTION
	F	P		
RE62	1	1	GD05224140	220K Ω
RE63	1	1	GD05273140	27K Ω
RE64	1	1	GD05273140	27K Ω
RE65	1	1	GD05224140	220K Ω
RE66	1	1	GD05224140	220K Ω
RE67	1	1	GD05104140	100K Ω
RE68	1	1	GD05104140	100K Ω
RE69	1	1	GD05224140	220K Ω
RE70	1	1	GD05224140	220K Ω
RE71	1	1	GD05473140	47K Ω
RE72	1	1	GD05473140	47K Ω
RE73	1	1	RM05031130	50K Ω (A), Variable
RE75	1	1	GD05473140	47K Ω
RE76	1	1	GD05473140	47K Ω
RE77	1	1	GD05184140	180K Ω
RE78	1	1	GD05184140	180K Ω
RE79	1	1	GD05224140	220K Ω
RE80	1	1	GD05224140	220K Ω
RE81	1	1	GD05273140	27K Ω
RE82	1	1	GD05273140	27K Ω
RE83	1	1	GD05273140	27K Ω
RE84	1	1	GD05273140	27K Ω
RE85	1	1	GD05154140	150K Ω
RE86	1	1	GD05154140	150K Ω
RE87	1	1	RM05031130	50K Ω (A), Variable
RE89	1	1	GD05102140	1K Ω
RE90	1	1	GD05102140	1K Ω
RE91	1	1	GD05334140	330K Ω
RE92	1	1	GD05334140	330K Ω
RE93	1	1	GD05102140	1K Ω
RE94	1	1	GD05102140	1K Ω
RE95	1	1	GD05563140	56K Ω
RE96	1	1	GD05563140	56K Ω
RE97	1	1	GD05104140	100K Ω
RE98	1	1	GD05104140	100K Ω
RE99	1	1	GD05224140	220K Ω
RF01	1	1	GD05101140	100 Ω
RF02	1	1	GD05101140	100 Ω
RF03	1	1	GD05102140	1K Ω
RF04	1	1	GD05102140	1K Ω
RF05	1	1	GD05104140	100K Ω
RF06	1	1	GD05104140	100K Ω
RF07	1	1	GD05562140	5.6K Ω
RF08	1	1	GD05562140	5.6K Ω
RF09	1	1	GD05473140	47K Ω
RF10	1	1	GD05473140	47K Ω
RF11	1	1	GD05104140	100K Ω
RF12	1	1	GD05104140	100K Ω
RF13	1	1	GD05681140	680 Ω
RF14	1	1	GD05681140	680 Ω
RF15	1	1	GD05222140	2.2K Ω
RF16	1	1	GD05222140	2.2K Ω
RF17	1	1	GD05682140	6.8K Ω
RF18	1	1	GD05682140	6.8K Ω
RF19	1	1	GD05821140	820 Ω
RF20	1	1	GD05821140	820 Ω

- (F): for Japan
- (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
RF31	1	1	RK02030620	20K Ω (B), Variable
RF32	1	1	GD05103140	10K Ω
RF33	1	1	GD05393140	39K Ω
RF34	1	1	GD05393140	39K Ω
RF35	1	1	RA01040800	100K Ω (B), Trimming
RF36	1	1	GD05124140	120K Ω
RF37	1	1	GD05563140	56K Ω
RF38	1	1	GD05563140	56K Ω
RF39	1	1	GD05333140	33K Ω
RF40	1	1	GD05124140	120K Ω
RF41	1	1	GD05104140	100K Ω
RF42	1	1	GD05562140	5.6K Ω
RF43	1	1	GD05562140	5.6K Ω
RF44	1	1	GD05104140	100K Ω
RF45	1	1	GD05393140	39K Ω
RF46	1	1	GD05393140	39K Ω
RF47	1	1	GD05393140	39K Ω
RF48	1	1	GD05333140	33K Ω
RF49	1	1	GD05823140	82K Ω
RF50	1	1	GG05100140	10 Ω
RF51	1	1	GD05123140	12K Ω
RF52	1	1	GD05224140	220K Ω
RF53	1	1	RK02030620	20K Ω (B), Variable
RF54	1	1	GD05103140	10K Ω
RF55	1	1	GD05393140	39K Ω
RF56	1	1	GD05393140	39K Ω
RF57	1	1	RA01040800	100K Ω (B), Trimming
RF58	1	1	GD05124140	120K Ω
RF59	1	1	GD05563140	56K Ω
RF60	1	1	GD05563140	56K Ω
RF61	1	1	GD05333140	33K Ω
RF62	1	1	GD05124140	120K Ω
RF63	1	1	GD05104140	100K Ω
RF64	1	1	GD05562140	5.6K Ω
RF65	1	1	GD05562140	5.6K Ω
RF66	1	1	GD05104140	100K Ω
RF67	1	1	GD05393140	39K Ω
RF68	1	1	GD05393140	39K Ω
RF69	1	1	GD05393140	39K Ω
RF70	1	1	GD05333140	33K Ω
RF71	1	1	GD05823140	82K Ω
RF72	1	1	GD05393140	39K Ω
RF73	1	1	GD05393140	39K Ω
RF74	1	1	GD05124140	120K Ω
RF75	1	1	GD05224140	220K Ω
RF76	1	1	GD05224140	220K Ω
RF77	1	1	GD05394140	390K Ω
RF78	1	1	GD05124140	120K Ω
RF79	1	1	GD05224140	220K Ω
RF80	1	1	GD05394140	390K Ω
RF81	1	1	GD05224140	220K Ω
RF82	1	1	GD05473140	47K Ω
RF83	1	1	GD05103140	10K Ω

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
DE01	1	1	HD20001000	PE01-SEMICONDUCTORS Diode 1S1555
QE01	1	1	HT327841F0	Transistor 2SC2784(F)
QE02	1	1	HT327841F0	Transistor 2SC2784(F)
QE03	1	1	HT327851F0	Transistor 2SC2785(F)
QE04	1	1	HT327851F0	Transistor 2SC2785(F)
QE05	1	1	HT327851F0	Transistor 2SC2785(F)
QE06	1	1	HT327851F0	Transistor 2SC2785(F)
QE07	1	1	HT327851F0	Transistor 2SC2785(F)
QE08	1	1	HC10003090	IC NJM4558D
QE09	1	1	HC10003090	IC NJM4558D
QE10	1	1	HC10016090	IC NJM4556D
QE11	1	1	HC10003090	IC NJM4558D
QE12	1	1	HC10003090	IC NJM4558D
QE13	1	1	HC10003090	IC NJM4558D
QE14	1	1	HC10003090	IC NJM4558D
QE15	1	1	HC10049020	IC MN3008
QE16	1	1	HC10003090	IC NJM4558D
QE17	1	1	HC10003090	IC NJM4558D
QE18	1	1	HC10049020	IC MN3008
QE19	1	1	HC10003090	IC NJM4558D
QE20	1	1	HC10044020	IC MN3101
JE01	1	1	YT02040470	PE01-MISCELLANEOUS Terminal
JE02	1	1	YT02040470	Terminal
JE03	1	1	YT02040470	Terminal
SE01	1	1	SP02011100	Push Switch, Mic Echo
SE02	1	1	SP02011100	Push Switch, Line Echo
SE03	1	1	SP02011100	Push Switch, Tape1/Guitar
SE04	1	1	SP04010460	Push Switch, Tape2/Line
SE05	1	1	SP02011100	Push Switch, Tape
SE06	1	1	SS02050010	Slide Switch, Phones Monitor
SE07	1	1	SB11080010	Switch Band, FLX
WE01	1	1	YU03200260	Jumper Lead, (3P)
WE02	1	1	YU07060260	Jumper Lead, (7P)
WE03	1	1	YU07180260	Jumper Lead, (7P)
WE04	1	1	YU03300260	Jumper Lead, (3P)
WE05	1	1	YU07300260	Jumper Lead, (7P)
WE06	1	1	YU07500260	Jumper Lead, (7P)
WE07	1	1	YU07140260	Jumper Lead, (7P)
WE08	1	1	YU03180260	Jumper Lead, (3P)
WE09	1	1	YU02160260	Jumper Lead, (2P)
WE10	1	1	YU03120260	Jumper Lead, (3P)
WE11	1	1	YU03120260	Jumper Lead, (3P)
WE12	1	1	YU07100260	Jumper Lead, (7P)

- (F): for Japan
- (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION		
	F	P				
PG01	1	1	YK030H2410	PG01-EQ, DISPLAY & POWER SUPPLY CIRCUIT BOARD		
		1	ZZ030H2410	P.W. Board, EQ, Display & Power Supply		
				P.W. Board Assembly		
				PG01-CAPACITORS		
CG01	1	1	EA47505030	Elect	4.7 μ F	50V
CG02	1	1	EA47505030	Elect	4.7 μ F	50V
CG05	1	1	DD11100370	Ceramic	10pF	50V
CG06	1	1	DD11100370	Ceramic	10pF	50V
CG07	1	1	EA10605030	Elect	10 μ F	50V
CG08	1	1	EA10605030	Elect	10 μ F	50V
CG09	1	1	DD11100370	Ceramic	10pF	± 0.5 pF
CG10	1	1	DD11100370	Ceramic	10pF	± 0.5 pF
CG11	1	1	DD15471370	Ceramic	470pF	$\pm 5\%$
CG12	1	1	DD15471370	Ceramic	470pF	$\pm 5\%$
CG13	1	1	EA47505030	Elect	4.7 μ F	50V
CG14	1	1	EA47505030	Elect	4.7 μ F	50V
CG15	1	1	EA47601630	Elect	47 μ F	16V
CG16	1	1	EA47601630	Elect	47 μ F	16V
CG17	1	1	EA22505030	Elect	2.2 μ F	50V
CG18	1	1	EA22505030	Elect	2.2 μ F	50V
CG19	1	1	EA10505030	Elect	1 μ F	50V
CG20	1	1	EA10505030	Elect	1 μ F	50V
CG21	1	1	EA47405030	Elect	0.47 μ F	50V
CG22	1	1	EA47405030	Elect	0.47 μ F	50V
CG23	1	1	EA33405030	Elect	0.33 μ F	50V
CG24	1	1	EA33405030	Elect	0.33 μ F	50V
CG25	1	1	DF15154350	Film	0.15 μ F	$\pm 5\%$
CG26	1	1	DF15154350	Film	0.15 μ F	$\pm 5\%$
CG27	1	1	DF15823350	Film	0.082 μ F	$\pm 5\%$
CG28	1	1	DF15823350	Film	0.082 μ F	$\pm 5\%$
CG29	1	1	DF15393350	Film	0.039 μ F	$\pm 5\%$
CG30	1	1	DF15393350	Film	0.039 μ F	$\pm 5\%$
CG31	1	1	DF15183350	Film	0.018 μ F	$\pm 5\%$
CG32	1	1	DF15183350	Film	0.018 μ F	$\pm 5\%$
CG33	1	1	DF15822350	Film	8200pF	$\pm 5\%$
CG34	1	1	DF15822350	Film	8200pF	$\pm 5\%$
CG35	1	1	DF15472350	Film	4700pF	$\pm 5\%$
CG36	1	1	DF15472350	Film	4700pF	$\pm 5\%$
CG37	1	1	EA10505030	Elect	1 μ F	50V
CG38	1	1	EA10505030	Elect	1 μ F	50V
CG39	1	1	EA47405030	Elect	0.47 μ F	50V
CG40	1	1	EA10505030	Elect	1 μ F	50V
CG41	1	1	EA10605030	Elect	10 μ F	50V
CG42	1	1	EA10605030	Elect	10 μ F	50V
CG43	1	1	EA10605030	Elect	10 μ F	50V
CG44	1	1	EA10605030	Elect	10 μ F	50V
CG45	1	1	EA10605030	Elect	10 μ F	50V
CG46	1	1	EA10605030	Elect	10 μ F	50V
CG47	1	1	EA10605030	Elect	10 μ F	50V
CG48	1	1	EA22703530	Elect	220 μ F	35V
CG49	1	1	EA22602530	Elect	22 μ F	25V
CG50	1	1	EA22602530	Elect	22 μ F	25V
CG51	1	1	EA47601630	Elect	47 μ F	16V
CG52	1	1	EA47601630	Elect	47 μ F	16V

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION
	F	P		
CG53	1	1	EA47701630	Elect 470 μ F 16V
CG54	1	1	EA47701630	Elect 470 μ F 16V
CG55	1	1	EA33701630	Elect 330 μ F 16V
CG56	1	1	EA33701630	Elect 330 μ F 16V
CG57	1	1	EA22702530	Elect 220 μ F 25V
CG58	1	1	EA22702530	Elect 220 μ F 25V
CG59	1	1	EA22802530	Elect 2200 μ F 25V
CG60	1	1	EA22802530	Elect 2200 μ F 25V
CG61	1	1	EA47505030	Elect 4.7 μ F 50V
CG62	1	1	EA47505030	Elect 4.7 μ F 50V
CG63	1	1	EA10405030	Elect 0.1 μ F 50V
CG64	1	1	EA10405030	Elect 0.1 μ F 50V
CG65	1	1	EA10701030	Elect 100 μ F 10V
CG66	1	1	EA10801630	Elect 1000 μ F 16V
PG01-RESISTORS (All Resistors are $\pm 5\%$ & $\frac{1}{4}W$)				
RG01	1	1	GD05273140	27K Ω
RG02	1	1	GD05273140	27K Ω
RG03	1	1	GD05273140	27K Ω
RG04	1	1	GD05273140	27K Ω
RG05	1	1	GD05273140	27K Ω
RG06	1	1	GD05273140	27K Ω
RG07	1	1	GD05273140	27K Ω
RG08	1	1	GD05273140	27K Ω
RG09	1	1	GD05330140	33 Ω
RG10	1	1	GD05330140	33 Ω
RG11	1	1	GD05330140	33 Ω
RG12	1	1	GD05330140	33 Ω
RG13	1	1	GD05680140	680 Ω
RG14	1	1	GD05680140	680 Ω
RG15	1	1	GD05823140	82K Ω
RG16	1	1	GD05823140	82K Ω
RG17	1	1	GD05224140	220K Ω
RG18	1	1	GD05224140	220K Ω
RG19	1	1	GD05224140	220K Ω
RG20	1	1	GD05563140	56K Ω
RG21	1	1	GD05822140	8.2K Ω
RG22	1	1	GD05183140	18K Ω
RG23	1	1	GD05104140	100K Ω
RG24	1	1	GD05104140	100K Ω
RG25	1	1	GD05103140	10K Ω
RG26	1	1	GD05153140	15K Ω
RG27	1	1	GD05103140	10K Ω
RG28	1	1	GA05390010	39 Ω
RG29	1	1	GA05390010	39 Ω
RG30	1	1	GA05390010	39 Ω
RG31	1	1	GA05390010	39 Ω
RG32	1	1	GA05390010	39 Ω
RG33	1	1	GA05390010	39 Ω
RG34	1	1	GD05561140	560 Ω
RG35	1	1	GD05183140	18K Ω
RG36	1	1	GD05183140	18K Ω
RG37	1	1	GD05104140	100K Ω
RG38	1	1	GD05104140	100K Ω
RG39	1	1	GD05272140	2.7K Ω
RG40	1	1	GD05272140	2.7K Ω

- (F): for Japan
- (P): for PX

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	
	F	P			
RG41	1	1	GDO5562140	5.6K Ω	
RG42	1	1	GDO5562140	5.6K Ω	
RG43	1	1	GDO5223140	22K Ω	
RG44	1	1	GDO5223140	22K Ω	
RG45	1	1	GDO5273140	27K Ω	
RG46	1	1	GDO5273140	27K Ω	
△RG47	1	1	GGO5101140	100 Ω	
△RG48	1	1	GGO5101140	100 Ω	
RG49	1	1	GDO5103140	1K Ω	
RG50	1	1	GDO5103140	1K Ω	
△RG51	1	1	GA05470010	47 Ω	1W
△RG52	1	1	GA05470010	47 Ω	1W
△RG53	1	1	GGO5102140	1K Ω	
△RG54	1	1	GGO5102140	1K Ω	
△RG55	1	1	GGO5122120	1.2K Ω	½W
RG56	1	1	GD05221140	220 Ω	
RG57	1	1	GD05223140	22K Ω	
RG58	1	1	GD05105140	1M Ω	
RG59	1	1	GD05223140	22K Ω	
△RG60	1	1	GGO5222140	2.2K Ω	
RG61	1	1	GD05103140	10K Ω	
RG62	1	1	GD05103140	10K Ω	
PG01-SEMICONDUCTORS					
DG01	1	1	HD30012020	Zener	MA1150M
DG02	1	1	HD30012020	Zener	MA1150M
DG03	1	1	HD20001000	Diode	1S1555
△DG04	1	1	HD30022030	Diode	DSF10C
△DG05	1	1	HD20022030	Diode	DSF10C
△DG06	1	1	HD20022030	Diode	DSF10C
△DG07	1	1	HD20022030	Diode	DSF10C
△DG08	1	1	HD20022030	Diode	DSF10C
△DG09	1	1	HD20022030	Diode	DSF10C
△DG10	1	1	HD20022030	Diode	DSF10C
△DG11	1	1	HD20022030	Diode	DSF10C
△DG12	1	1	HD20022030	Diode	DSF10C
△DG13	1	1	HD20022030	Diode	DSF10C
QG01	1	1	HT403131E0	Transistor	2SD313(E)
QG02	1	1	HT205071E0	Transistor	2SB507(E)
QG03	1	1	HT327851F0	Transistor	2SC2785(F)
QG04	1	1	HT+27851F0	Transistor	2SC2785(F)
QG05	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG06	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG07	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG08	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG09	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG10	1	1	HT106842B0	Transistor	2SA684(Q, R)
QG11	1	1	HT106842B0	Tansistor	2SA684(Q, R)
QG12	1	1	HC10003090	IC	NJM4558D
QG13	1	1	HC10003090	IC	NJM4558D
QG14	1	1	HC10003090	IC	NJM4558D
QG15	1	1	HC10108030	IC	STK-6325A
QG16	1	1	HC10108030	IC	STK-6325A
QG17	1	1	HC10109030	IC	STK-6325C
QG18	1	1	HC10109030	IC	STK-6325C
QG19	1	1	HC10053020	IC	AN6882
QG20	1	1	HC10053020	IC	AN6882
QG21	1	1	HC10053020	IC	AN6882
QG22	1	1	HC38508090	IC	NJM78M08A

REF. DESIG.	Q'TY		PART NO.	DESCRIPTION	
	F	P			
JG01	1	1	YJ06002390	Jack, (5P)	
JG02	1	1	YJ06002390	Jack, (5P)	
JG03	1	1	YJ06002460	Jack, (7P)	
JG04	1	1	YJ06002430	Jack, (3P)	
JG05	1	1	YJ06002270	Jack, (8P)	
JG06	1	1	YJ06002270	Jack, (8P)	
JG07	1	1	YJ06002460	Jack, (8P)	
WG01	1	1	YU02180260	Jumper Lead, Wire	
WG02	1	1	YU05140260	Jumper Lead, Wire	
WG03	1	1	YU05140260	Jumper Lead, Wire	
WG04	1	1	YU05140260	Jumper Lead, Wire	
WG05	1	1	YU05140260	Jumper Lead, Wire	
WG06	1	1	YU05140260	Jumper Lead, Wire	
PG01-MISCELLANEOUS					
PJ01	1	1	YK030H2420	P.W. Board, EQ Volume	
			ZZ030H2420	P.W. Board Assembly	
PJ01-EQ VOLUME CIRCUIT BOARD					
PJ01-RESISTORS					
RJ01	1	1	RS05030470	50K Ω , Variable	
RJ02	1	1	RS05030470	50K Ω , Variable	
RJ03	1	1	RS05030470	50K Ω , Variable	
RJ04	1	1	RS05030470	50K Ω , Variable	
RJ05	1	1	RS05030470	50K Ω , Variable	
RJ06	1	1	RS05030470	50K Ω , Variable	
RJ07	1	1	RS05030470	50K Ω , Variable	
RJ08	1	1	RS05030470	50K Ω , Variable	
RJ09	1	1	RS05030470	50K Ω , Variable	
RJ10	1	1	RS05030470	50K Ω , Variable	
PK01-POWER SWITCH CIRCUIT BOARD					
PK01	1	1	YK030H2430	P.W. Board, Power Switch	
			ZZ030H2430	P.W. Board Assembly	
△GK01	1	1	DK18103850	Ceramic Cap. 0.01 μ F	
△SK01	1	1	SP01010650	Push Switch, Power	
PN01-LED CIRCUIT BOARD					
PN01	1	1	YK030H2440	P.W. Board, L.E.D.	
			ZZ030H2440	P.W. Board Assembly	
DN01	1	1	HI10052020	L.E.D. LN250RPH(RED)	
PS01-CHORUS/ECHO SWITCH CIRCUIT BOARD					
PS01	1	1	YK030H1920	P.W. Board, Chorus/Echo Switch	
			ZZ030H1920	P.W. Board Assembly	
SS01	1	1	SP02010870	Push Switch, Chorus/Echo	

- (F): for Japan
- (P): for PX

REF. DESIG.	QTY		PART NO.	DESCRIPTION
	F	P		
PT01	1	1	YK030H1930 ZZ030H1930	PT01-EQUALIZER SWITCH CIRCUIT BOARD P.W. Board, Equalizer Switch P.W. Board, Equalizer Switch
ST01	1	1	SP02010870	Push Switch, EQ On/Off
PV01	1	1	YK030H1950 ZZ030H1950	PV01-MASTER VOLUME CIRCUIT BOARD P.W. Board, Master Volume P.W. Board Assembly
RV01	1	1	RM05031120	50K Ω (B), Variable
PW01	1	1	YK030H1960 ZZ030H1960	PW01-MIC JACK CIRCUIT BOARD P.W. Board, Mic Jack P.W. Board Assembly
JW01	1		YJ01002110	Jack, Mic 1 Input
JW01	1		YJ01001780	Jack, Mic 1 Input
JW02	1		YJ01002110	Jack, Mic 2 Input
JW02	1		YJ01001780	Jack, Mic 2 Input

REF. DESIG.	QTY		PART NO.	DESCRIPTION
	F	P		
PX01	1	1	YK030H1970 ZZ030H1970	PX01-GUITAR JACK CIRCUIT BOARD P.W. Board, Guitar Jack P.W. Board Assembly
JX01	1		YJ01002110	Jack, Guitar 1 Input
JX01	1		YJ01001780	Jack, Guitar 1 Input
JX02	1		YJ01002110	Jack, Guitar 2 Input
JX02	1		YJ01001780	Jack, Guitar 2 Input
RX01	1	1	GD05102140	Resistor 1K Ω \pm 5% $\frac{1}{4}$ W
RX02	1	1	GD05102140	Resistor 1K Ω \pm 5% $\frac{1}{4}$ W
PY01	1	1	YK030H1980 ZZ030H1980	PY01-HEAD PHONE JACK CIRCUIT BOARD P.W. Board, Head Phone Jack P.W. Board Assembly
JY01	1		YJ01002080	Jack, Phone
JY01	1		YJ01001790	Jack, Phone
PZ01	1	1	YK030H1990 ZZ030H1990	PZ01-PIN JACK CIRCUIT BOARD P.W. Board, Pin Jack P.W. Board Assembly
JZ01	1	1	YT02020420	Terminal

(W01-00)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

NOTE ON SAFETY:

Symbol \triangle Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol \triangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

8. TECHNICAL SPECIFICATIONS

Input sensitivity/impedance	
Mic 1/2	2 mV/20 kΩ
Line, tape	150 mV/47 kΩ
Guitar/Keyboard	50 mV/47 kΩ
Maximum input	
Mic 1/2	100 mV (RMS), 1 kHz
Line, tape	6 V (RMS), 1 kHz
Frequency response	
Mic, line, tape	20 Hz ~ 20 kHz, ± 1 dB
Equalizer characteristics	±12 dB at each frequency
Distortion	
Line, tape	0.03%, 1 kHz, 1V input
S/N	
Line (JIS A)	70 dB
BBD echo (Electronic type)	
Delayed time	100m SEC
Echo time	0 ~ 2 SEC

GENERAL

Power Requirements	110 ~ 120/220 ~ 240 V AC, 50/60 Hz
Power Consumption	18 W
Dimensions	
Panel Width	16-3/8" (416 mm)
Panel Height	5-1/32" (128 mm)
Depth	10-1/4" (260 mm)
Weight	
Unit alone	9.7 lbs (4.4 kg)

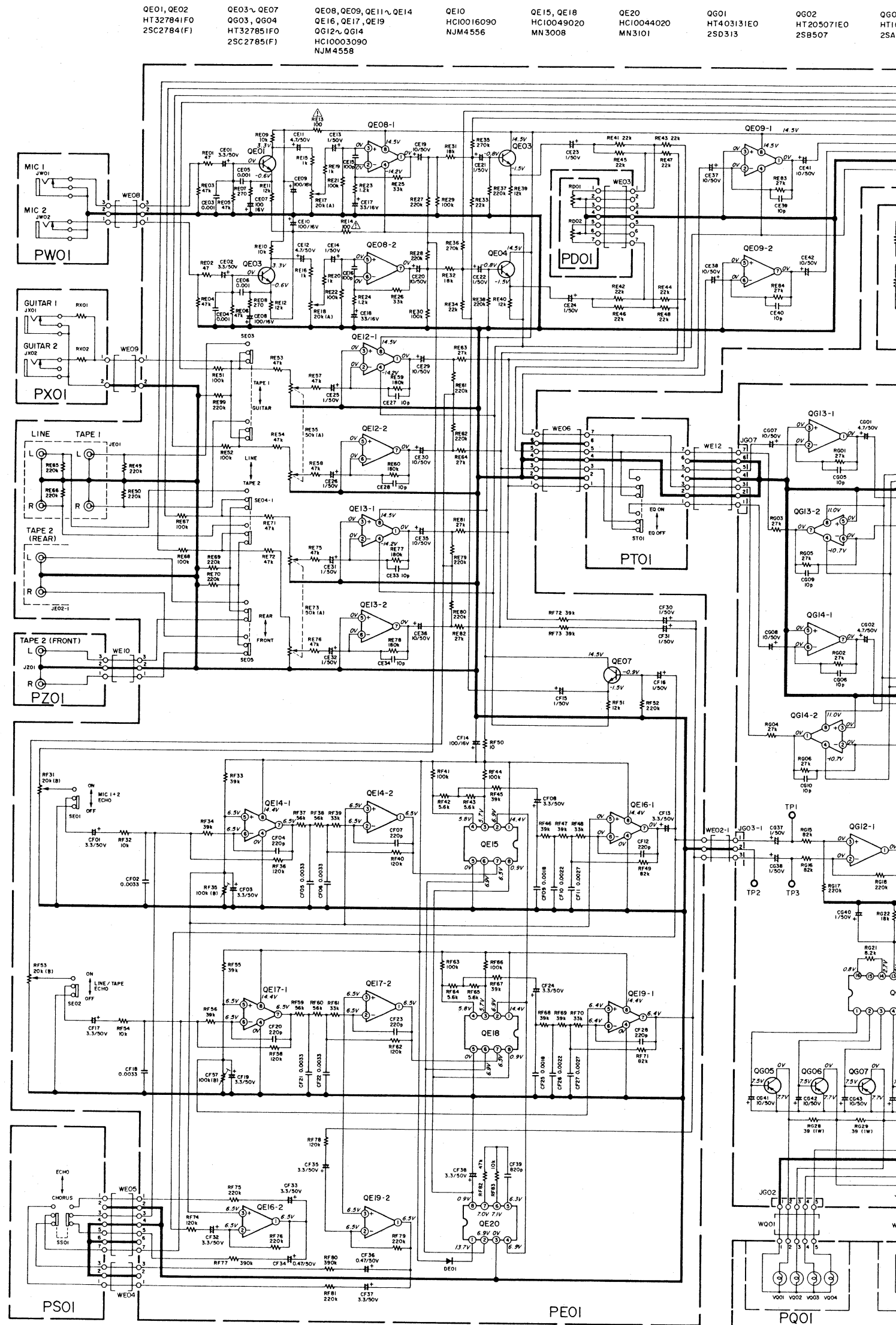
ACCESSORY

Pin Cord (Stereo)	2
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Specifications and appearance are subject to change for modification without notice.

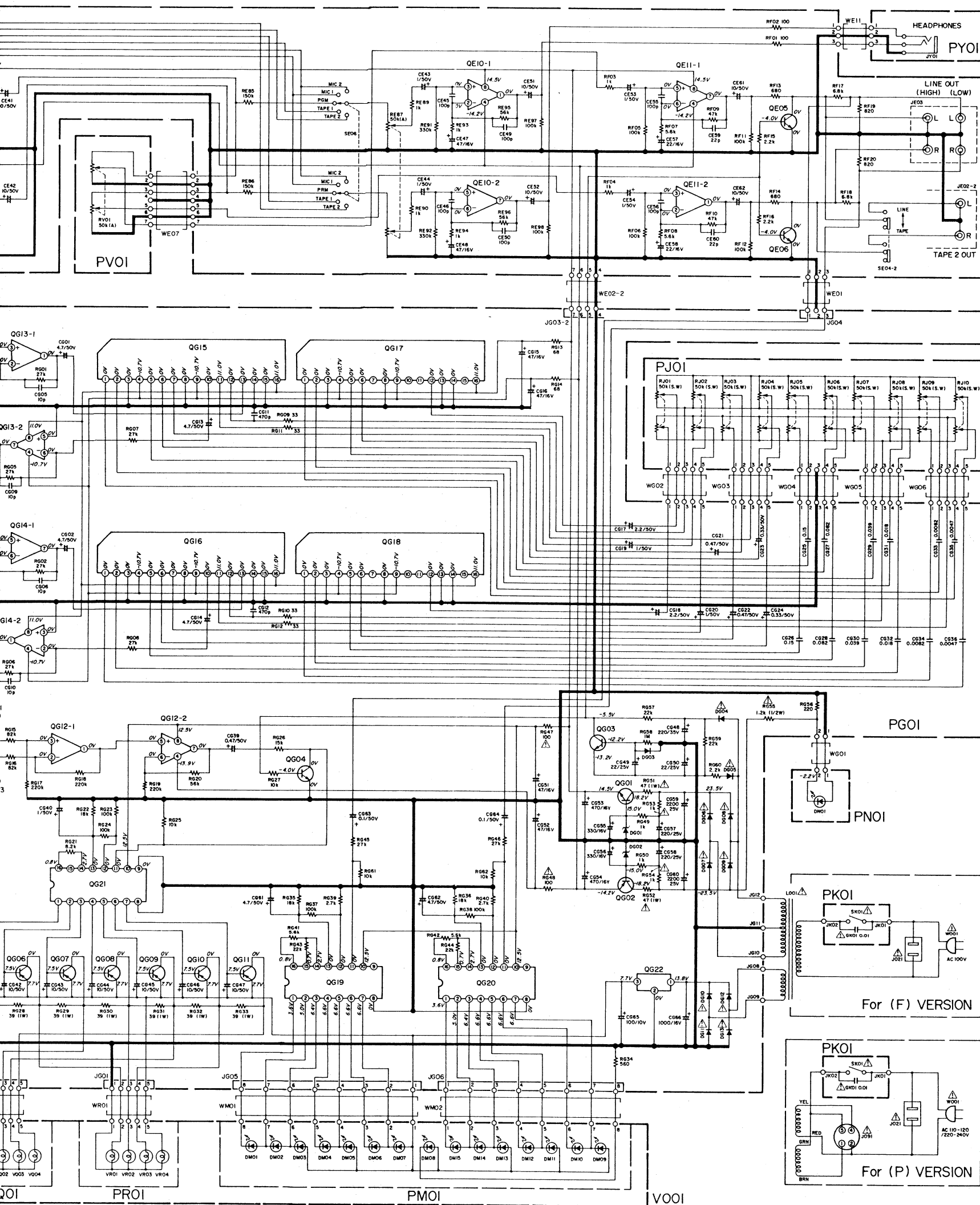
MEMORANDUM

9. SCHEMATIC DIAGRAM



Model EQ430

QG02 HT205071E0 2SB507
 QG05~QG11 HT106842B0 2SA684
 QG15, QG16 HC10108030 STK-6325A
 QG17, QG18 HC10109030 STK-6325C
 QG19~QG21 HC10053020 AN6882
 QG22 HC38508090 NJM78M08A
 DG01, DG03 HD20001000 IS2076, IS1555, etc.
 DG01, DG02 HD30012020 MA1150M
 DG04~DG13 HD200220030 DCF10C



2SC2784(F)
 QE01, QE02
 2SC2785(F)
 QE03~QE07
 QG03, QG04

2SA684
 QG05~QG11

2SD313
 QG01

2SB507
 QG02

NJM78M08A
 QG22

INPUT OUTPUT
 GND

TOP VIEW
 1 8
 4 5
 NJM4558D
 QE08, QE09
 QE11~QE14
 QE16, QE17, QE19
 QG12~QG14
 NJM4556
 QE10

TOP VIEW
 1 8
 4 5
 MN3101
 QE20

TOP VIEW
 1 16
 8 9
 AN6882
 QG19~QG21

TOP VIEW
 1 8
 4 5
 MN3008
 QE15, QE18

FRONT VIEW

STK-6325A QG15, QG16
 STK-6325C QG17, QG18

NOTE ON SAFETY:
 Symbol Δ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol Δ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.